Detailed sections from auger holes and outcrops in the Ladson, Moncks Corner, Mount Holly, and Stallsville quadrangles, South Carolina

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature

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Introduction

In the course of preparing detailed geologic maps for the Ladson, Moncks Corner, Mount Holly, and Stallsville quadrangles, sediments from numerous auger holes and outcrops were studied and recorded to determine their lithologic characteristics, spatial distribution, and temporal framework. While the major geologic boundaries have been summarized on the Mount Holly and Stallsville maps (Weems and Lemon, 1984a,b), and will be summarized on the forthcoming Ladson and Moncks Corner maps, much of the more detailed stratigraphic information could not be shown easily on a map and therefore is included in this open-file report for interested geologists, engineers, and urban planners. Information is included for 266 localities within these four quadrangles. Additional described localities also can be found in publicly available reports on the Ladson quadrangle (Malde, 1959; Colquhoun, 1961) and the Moncks Corner quadrangle (Inden, 1976).

A few of the localities (so indicated) were natural outcrops or ditch banks, but since exposures are rare the majority of the data was gathered by augering. These auger holes were drilled with a truck-mounted, Mobile Drill B-40 power auger, using 5-foot stem sections. One stem was augered into the ground and then pulled to describe the soil profile. After this, a second run was made in which additional stems were added until either a chattering sound followed by a sudden tightening of the drill string occurred (penetration of the Ashley Formation) or until the vacated 5 feet of the first auger run was filled by rising sediment from the newly penetrated section. In the latter case (usually 4-6 flights, depending on the density of the material being augered), the stems were pulled and described (allowing for 5 feet of total rise during drilling). In most cases the base of the Pleistocene section was penetrated by the third run; in exceptionally thick sections, the rest of the section was augered in 20 to 30 foot runs. At two localities (MH-47, MH-87) the U. S. Geological Survey Mobile Drill B-50 unit was used to obtain a core of sediments down to the top of the Cross Limestone. These cores are stored in the U.S. Geological Survey Warehouse in Herndon, Virginia.

Although the outcrop and auger hole sections vary considerably in thickness, from 2 feet (ST-11) to 208 feet (MH-47), most fall in the range of 35-55 feet. Most of the Quaternary and upper Tertiary shallow subsurface units are thin (less than 50 feet total thickness) and poorly consolidated down to the upper Oligocene Ashley Formation of the Cooper Group (locally called the "Cooper Marl"). In contrast, the Ashley is often 100 feet or more thick and firmly compacted. It was impractical in most instances to try to drill through the Ashley with the power auger, so most of our drill holes were filled and abandoned as soon as we penetrated this unit.

No attempt was made to describe sediments in any great detail. Grain sizes and sediment colors were estimated visually without aid of grain-size or color charts. It is possible, therefore, that units described as "clays" may include clayey silts or clayey sands. Unit names conform to those used by Weems and Lemon (1984a, 1984b), with the addition of the term "Daniel Island beds" (Weems and others, 1985) for dense, probably lower Pleistocene clays and sands which were encountered sporadically throughout the area of these quadrangles.

References cited

Colquhoun, D. J., 1961, Contours drawn on top of the Cooper Marl in the Ladson quadrangle, South Carolina: South Carolina State Development Board, Division of Geology, MS-4 (1:24,000).

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Ages and Sequence of Regionally Recognized Geologic Units

(in any given section, many units will be missing due to erosion)

(Unnamed)		HOLOCENE
Silver Bluff		
Wando Formation	upper member	PLEISTOCENE
	middle member	
	lower member	
Ten Mile Hill beds		
Ladson Formation		
Penholoway Formation		
Daniel Island beds		
Waccamaw Formation		

	Goose Creek Limestone	PLIOCENE
	Givhans Limestone	
	Raysor Formation	
	Coosawhatchie(?) Formation	MIOCENE
	Marks Head Formation	
	Edisto Formation	OLIGOCENE
	Chandler Bridge Formation	
COOPER GROUP	Ashley Formation	

COOPER GROUP	Drayton Limestone	EOCENE
	Parkers Ferry Formation	
	Harleyville Formation	
SANTEE GROUP (in part)	Cross Limestone	

LADSON QUADRANGLE*
(Depths in feet)

LA-1: 2.5 miles E of west quad. (quadrangle) border, 0.1 miles N of south quad. border. Top of river bluff about 12 feet elevation.

WANDO FM** (UPPER MEM)	0-4	Sand, fine-grained, pale-yellowish-orange, bed of phosphate rock and pebbles at base
ASHLEY FM	4-12	Calcarenite, fine-grained, olive-brown, massive

Base of Wando Formation (upper member): +8 feet above sea level
Ashley Formation to water line of Ashley River

LA-2: 2.95 miles E of west quad. border, 0.65 miles N of south quad. border. Top of river bluff about 12 feet elevation.

MINE SPOIL	0-4	Sand, bedding pervasively contorted and disrupted
ASHLEY FM	4-12	Calcarenite, fine-grained, olive-brown, massive

Former base of Wando Formation: +8 feet above sea level
Ashley Formation to water line of Ashley River

LA-3: 1.6 miles E of west quad. border, 0.6 miles N of south quad. border. Top of river bluff about 12 feet elevation.

WANDO FM (UPPER MEM)	0-2	Sand, fine-grained, pale-yellowish-orange, phosphate rock and pebbles along basal contact
ASHLEY FM	2-12	Calcarenite, fine-grained, olive-brown, massive

Base of Wando Formation (upper member): +10 feet above sea level
Ashley Formation to water line of Ashley River

LA-4: 0.3 miles E of west quad. border, 1.25 miles N of south quad. border. Mostly wooded river bluff, basal 8 feet exposed.

ASHLEY FM	0-8	Calcarenite, fine-grained, olive-brown, massive

Ashley Formation to water line of Ashley River

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*also see Malde, 1959, and Colquhoun, 1961, for more logs and depth to Ashley data

**FM = FORMATION, MEM = MEMBER

LA-5: 1.85 miles W of east quad. border, 4.21 miles N of south quad. border. Surface elevation 27 feet.

TEN MILE HILL BEDS	0-3	Sand, fine-grained, medium-orange, micaceous, clayey
	3-5	Sand, fine-grained, light-gray, loose
	5-18.5	Sand, fine-grained, medium-orange (5-10) grading through medium-gray (10-17.5) to dark-gray, loose, clayey
	18.5-19.5	Clay, medium-gray
	19.5-20	Lignite, dark-brown
	20-45	Clay, medium-gray, plastic, shell fragments at 30 feet and from 41-43 feet
	45-54	Clay, medium-gray, 0.5 foot-thick phosphate pebble bed at base
ASHLEY FM	54-60	Calcarenite, fine-grained, olive-brown, dense, quartz and phosphate sand grains present

Base of Ten Mile Hill beds: -27 feet below sea level
Bottomed in Ashley Formation

LA-6: 2.5 miles W of east quad. border, 2.15 miles S of north quad. border. Surface elevation 15 feet.

TEN MILE HILL BEDS	0-5	Sand, fine-grained, medium-orange and medium-gray mottled, clayey
	5-14.5	Clay, medium-gray, massive, wood pieces concentrated at base
	14.5-15	Sand, coarse-grained, composed of sugary-looking quartz
ASHLEY FM	15-17	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: ±0 feet at sea level
Bottomed in Ashley Formation

LA-7: 2.68 miles W of east quad. border, 3.94 miles S of north quad. border.
Surface elevation 9 feet.

WANDO FM (UPPER MEM)	0-5	Clay, medium-green mottled medium-orange, grades to:
	5-10	Clay, medium-blue, becomes slightly sandy downward
	10-12	Sand, fine-grained, medium-bluish-gray, clayey
	12-13	Sand, coarse-grained, medium-bluish-gray, silty
DANIEL ISLAND BEDS	13-14	Clay, medium-bluish-gray, contains numerous phosphate pebbles
ASHLEY FM	14-15	Calcarenite, fine-grained, olive-brown, dense, quartz and phosphate sand-grains present

Base of Wando Formation (upper member): -4 feet below sea level
Base of Daniel Island beds: -5 feet below sea level
Bottomed in Ashley Formation

LA-8: 1.0 miles E of west quad. border, 2.65 miles N of south quad. border.
Surface elevation 28 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained, light-gray and medium-orangish-brown mottled, coarsens to coarse-grained and subangular by base, clayey
	5-11	Sand, medium- to coarse-grained, medium-yellowish-brown, clayey
	11-16	Sand, medium-grained, medium-yellowish-brown, very-fine-grained heavies present
ASHLEY FM	16-25	Calcarenite, fine-grained, pale-brown grading down to olive-brown

Base of Ten Mile Hill beds: +12 feet above sea level
Bottomed in Ashley Formation

LA-9: 1.15 miles E of west quad. border, 3.55 miles N of south quad. border.
Surface elevation 29 feet.

TEN MILE HILL BEDS	0-16	Clay, dark-gray, fine-grained sandy, stiff
	16-18	Sand, medium-grained, dark-gray, dense, clayey, contains numerous lumps of phosphate about 1 cm in diameter
ASHLEY FM	18-30	Calcarenite, fine-grained, pale-brown grading down to olive-brown by 22 feet, abundant sand-size phosphate

Base of Ten Mile Hill beds: +11 feet above sea level
Bottomed in Ashley Formation

LA-10: 2.0 miles E of west quad. border, 3.0 miles N of south quad. border.
Surface elevation 29 feet.

TEN MILE HILL BEDS	0-10	Sand, medium-grained, medium-orangish-brown and light-gray mottled, well sorted clayey, stiff
	10-15	Clay, medium- to dark-gray, sandy, gradational contacts above and below
	15-19	Sand, medium-grained, medium-gray, clayey, stiff, contains lumps of phosphate
ASHLEY FM	19-25	Calcarenite, fine-grained, light-brown grading down to olive-brown

Base of Ten Mile Hill beds: +10 feet above sea level
Bottomed in Ashley Formation

LA-11: 3.35 miles W of east quad. border, 2.3 miles N of south quad. border.
Surface elevation 44 feet.

TEN MILE HILL BEDS	0-18	Sand, fine-grained, medium-orange grading down to light-yellow, well sorted, sparsely micaceous, very fine grained heavy minerals abundant
	18-37	Sand, fine-grained, light-gray, sparse phosphate pebbles at base
CHANDLER BRIDGE FM	at 37	Clay, dark-greenish-gray, slightly calcareous, dense, about 2 inches thick
ASHLEY FM	37-45	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +7 feet above sea level
Base of Chandler Bridge Formation: +7 feet above sea level
Bottomed in Ashley Formation

LA-12: 3.1 miles W of east quad. border, 1.1 miles N of south quad. border. Surface elevation 30 feet.

TEN MILE HILL BEDS	0-19	Sand, medium-grained, medium-orange (0-5) grading through light-yellow (5-8) then back to medium-orange, light-gray clay lense at 10 feet, phosphate pebble bed at base
CHANDLER BRIDGE FM	19-21	Sand, fine-grained, light-gray, well sorted, light-brown phosphate lumps scattered throughout and not concentrated at base
ASHLEY FM	21-25	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +11 feet above sea level
Base of Chandler Bridge Formation: +9 feet above sea level
Bottomed in Ashley Formation

LA-13: 1.05 miles W of east quad. border, 1.2 miles N of south quad. border. Surface elevation 30 feet.

FILL	0-3	Road base
WANDO FM (LOWER MEM)	3-4	Soil, dark-gray
	4-5	Sand, fine-grained, medium-orangish-brown, clayey
	5-7	Clay, light-gray and medium-orange mottled, stiff
TEN MILE HILL BEDS	7-42	Sand, medium-grained, light-green grading down to light-gray, well sorted, micaceous, very fine grained heavy minerals abundant
	42-44	Sand, medium-grained, medium-gray, shelly
	44-49	Conglomerate, composed of phosphate lumps up to 4 cm in diameter
ASHLEY FM	49-50	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (lower member): +23 feet above sea level
Base of Ten Mile Hill beds: -19 feet below sea level
Bottomed in Ashley Formation

LA-14: 2.4 miles W of east quad. border, 2.75 miles N of south quad. border.
Surface elevation 42 feet.

TEN MILE HILL BEDS	0-22	Sand, fine-grained, medium-orange (0-2) grading through light-yellow (2-4) to light-gray, well sorted, iron-hydroxide-cemented lumps in upper 2 feet
	22-26	Clay, medium-blue, sandy (fine-grained)
	26-41	Sand, medium-grained, medium-blue, silty and clayey, shelly
	41-44	Conglomerate, composed of phosphate pebbles up to 3 cm in diameter
ASHLEY FM	44-50	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: -2 feet below sea level
Bottomed in Ashley Formation

LA-15: 3.0 miles W of east quad. border, 3.75 miles N of south quad. border.
Surface elevation 32 feet.

TEN MILE HILL BEDS	0-10	Sand, fine-grained, light-orangish-brown and light-gray mottled, well sorted, clayey, stiff (0-8) grading to clean and loose (8-10)
	10-18	Clay, medium-bluish-gray, dense, contains medium-green lumps and oyster fragments
ASHLEY FM	18-40	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +14 feet above sea level
Bottomed in Ashley Formation

LA-16: 3.2 miles E of west quad. border, 3.75 miles N of south quad. border.
Surface elevation 35 feet.

TEN MILE HILL BEDS	0-3	Sand, fine-grained, medium-orangish-brown and light-gray mottled, well sorted, grading down to:
	3-20	Clay, medium-orangish-brown and light-gray mottled, stiff, grades at base to:
	20-23	Sand, medium-grained, medium-gray, well sorted, sharp contact with bed below
DANIEL ISLAND BEDS	23-36	Clay, medium-gray, very stiff and dense, sparse phosphate pebbles up to 2 cm in diameter at base
ASHLEY FM	36-50	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +12 feet above sea level
Base of Daniel Island beds: -1 foot below sea level
Bottomed in Ashley Formation

LA-17: 0.2 miles W of east quad. border, 0.05 miles N of south quad. border.
Surface elevation 27 feet.

WANDO FM (LOWER MEM)	0-16	Sand, medium-grained, humic, dark-brownish-gray, well sorted, micaceous, shelly below 9 feet
	16-27	Sand, medium-grained, medium-gray, clayey and stiff at top, looser downward, basal foot contains phosphate pebbles up to 4 cm in diameter
ASHLEY FM	27-30	Calcarenite, fine-grained, light-brown grading down to olive-brown

Base of Wando Formation (lower member): ±0 feet at sea level
Bottomed in Ashley Formation

LA-18: 3.3 miles E of west quad. border, 2.45 miles N of south quad. border.
Surface elevation 42 feet.

TEN MILE HILL BEDS	0-30	Sand, fine-grained, medium-orange (0-5) grading down to medium-gray, well sorted, shelly below 18 feet
	30-38	Clay, medium-gray, sandy, stiff, grading down to sand, medium-grained, medium-gray, well sorted sparse phosphate pebbles about 1 cm in diameter at base
ASHLEY FM	38-65	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +4 feet above sea level
Bottomed in Ashley Formation

LA-19: 2.4 miles E of west quad. border, 4.2 miles S of north quad. border.
Surface elevation 14 feet.

WANDO FM (UPPER MEM)	0-7	Clay, dark-gray grading through medium-gray to light-gray, sandy
PENHOLOWAY FM	7-27	Sand, fine-grained, light-gray, silty, soft, sparsely shelly at top grading down to coarse-grained quartz sand and shell hash near base, sparse phosphate pebbles about 0.5 cm in diameter at base; alloisoleucine/isoleucine ratios for Mulinia about 0.85 (Julia Corrado, oral communication, 1983)
ASHLEY FM	27-35	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (upper member): +7 feet above sea level
Base of Penholoway Formation: -13 feet below sea level
Bottomed in Ashley Formation

LA-20: 0.3 miles W of east quad. border, 1.1 miles S of north quad. border. Surface elevation 30 feet.

TEN MILE HILL BEDS	0-20	Clay, medium-reddish-orange and light-gray mottled grading by base to dark-gray, sandy, stiff, iron-hydroxide-cemented lumps around 4 feet, gradational to bed below
	20-35	Sand, fine-grained, dark-gray, silty, a few clay laminae near top, grading down to sand, medium-grained, well sorted, sparse phosphate pebbles about 2 cm in diameter at base
ASHLEY FM	35-40	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: -5 feet below sea level
Bottomed in Ashley Formation

LA-21: 1.85 miles W of east quad. border, 1.7 miles S of north quad. border. Surface elevation 35 feet.

TEN MILE HILL BEDS	0-12	Clay, bright medium-orange with medium-red streaks grading through medium-orange to light-gray, silty towards base
LADSON FM	12-19	Sand, medium- to coarse-grained, light-gray, very silty and soft
ASHLEY FM	19-40	Calcarenite, fine-grained, medium-brown grading down to olive-brown

Base of Ten Mile Hill beds: +23 feet above sea level
Base of Ladson Formation: +16 feet above sea level
Bottomed in Ashley Formation

LA-22: 2.55 miles E of west quad. border, 2.65 miles S of north quad. border. Surface elevation 20 feet.

FILL	0-4	Road base
ASHLEY FM	4-5	Clay, light-gray, sandy, contains white phosphate nodules, grading down to:
	5-15	Calcarenite, fine-grained, light-brown grading to olive-green by base

Bottomed in weathered profile of Ashley Formation

LA-23: 2.35 miles E of west quad. border, 2.65 miles S of north quad. border.
Surface elevation 10 feet.

FILL	0-5	Road base, compacted swamp muck at base
MINE SPOIL	5-10	Clay, light-gray, soft, sandy, probably spoil from phosphate strip-mine
ASHLEY FM	10-20	Calcarenite, fine-grained, olive-brown

Base of mine spoil: ±0 feet at sea level
Bottomed in Ashley Formation

LA-24: On east quad. border, 1.3 miles N of south quad. border.
Surface elevation 10 feet.

FILL	0-3	Road base and phosphate mine-spoil
DANIEL ISLAND BEDS (?)	3-6	Clay, medium-gray, sticky, dense
ASHLEY FM	6-25	Calcarenite, fine-grained, light-brown grading down to olive-brown

Former base of Wando Formation: +7 feet above sea level
Base of Daniel Island beds(?): +4 feet above sea level
Bottomed in Ashley Formation

LA-25: 3.2 miles W of east quad. border, 3.7 miles S of north quad. border.
Surface elevation 20 feet.

TEN MILE HILL BEDS	0-6	Sand, medium-grained, light-gray, clayey, phosphate pebble bed at base
CHANDLER BRIDGE FM	6-8	Sand, fine-grained, light-gray, phosphate sand abundant and phosphate-cemented lumps of sand, stiff, dense
	8-9	Sand, fine-grained, light-gray, loose, contained sea turtle skeleton
ASHLEY FM	9-12	Calcarenite, fine-grained, light-yellowish-brown grading to olive-brown, dense

Base of Ten Mile Hill beds: +14 feet above sea level
Base of Chandler Bridge Formation: +11 feet above sea level
Bottomed in Ashley Formation

LA-26: 0.85 miles W of east quad. border, 0.2 miles N of south quad. border.
Surface elevation 20 feet.

WANDO FM (UPPER MEM)	0-20	Clay, medium-blue, sandy, grading down to sand, fine-grained, medium-blue, clayey, abundantly shelly in lower 10 feet including Mercenaria, shells fresh and lustrous
ASHLEY FM	20-21	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (lower member): ±0 feet at sea level
Bottomed in Ashely Formation

LA-27: 2.6 miles E of west quad. border, 2.0 miles N of south quad. border.
Top of creek bank about 8 feet elevation.

MINE SPOIL	0-3	Sand, bedding contorted and jumbled
ASHLEY FM	3-4	Calcarenite, fine-grained, olive-brown, massive

Former base of Silver Bluff(?): +5 feet above sea level
Ashley Formation to base of exposure

LA-28: 1.55 miles E of west quad. border, 0.2 miles N of south quad. border.
Surface elevation about 17 feet.

FILL	0-3	Road base
WANDO FM (UPPER MEM)	3-5	Clay, medium-brownish-gray, sandy, stiff
ASHLEY FM	5-25	Calcarenite, fine-grained, olive-brown, contains quartz and phosphate sand
PARKERS FERRY FM	25-40	Calcilutite, medium-greenish-gray, stiff, plastic

Base of Wando Formation (upper member): +12 feet above sea level
Base of Ashley Formation: -8 feet below sea level
Bottomed in Parkers Ferry Formation

LA-29: 0.7 miles E of west quad. border, 0.7 miles N of south quad. border.
Surface elevation 26 feet.

FILL	0-1	Road base
TEN MILE HILL BEDS	1-8	Sand, fine-grading down to coarse-grained, medium-yellowish-orange, silty, clayey
	8-15	Sand, medium-grained, medium-gray, clayey, with lenses of medium-gray clay, phosphate pebbles up to 4 cm in diameter at base
ASHLEY FM	15-25	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +11 feet above sea level
Bottomed in Ashley Formation

LA-30: 1.5 miles E of west quad. border, 2.3 miles N of south quad. border.
Surface elevation 27 feet.

FILL	0-1	Road base
TEN MILE HILL BEDS	1-2	Clay, dark-gray, sandy, roots present
	2-10	Sand, fine-grained, olive-gray grading through greenish-gray to yellowish-gray, clayey, scattered clay laminae 1 cm or less thick
	10-20	Sand, medium- grading down to coarse-grained, light-olive-gray, pebbly toward base
ASHLEY FM	20-25	Calcarenite, fine-grained, light-olive-gray grading down to olive-brown

Base of Ten Mile Hill beds: +7 feet above sea level
Bottomed in Ashley Formation

LA-31: 2.05 miles E of west quad. border, 2.1 miles N of south quad. border. Surface elevation 28 feet.

TEN MILE HILL BEDS	0-8	Clay, medium-gray, and sand, medium-grained, medium-red, clayey, stiff
	8-17	Sand, fine-grained grading down to medium-grained, medium-yellowish-brown, slightly muddy, phosphate pebbles at base
CHANDLER BRIDGE FM	17-19	Sand, fine-grained, medium-gray, soft, clayey
ASHLEY FM	19-55	Calcarenite, fine-grained, olive-green, sandy and clayey, minor sand-size phosphate
PARKERS FERRY FM	55-82	Calcilutite, medium-greenish-gray, stiffens downward

Base of Ten Mile Hill beds: +11 feet above sea level
Base of Chandler Bridge Formation: +9 feet above sea level
Base of Ashley Formation: -27 feet below sea level
Bottomed in Parkers Ferry Formation

LA-32: 3.45 miles E of west quad. border, 0.4 miles N of south quad. border. Surface elevation 28 feet.

FILL	0-4.5	Materials of diverse origin
TEN MILE HILL BEDS	4.5-8	Sand, fine-grained, dark-brown, contains roots
	8-13	Clay, light-bluish-gray to greenish-gray with medium-yellowish-brown and medium-orange mottles, phosphate pebbles and sand present near base
ASHLEY FM	13-20	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +15 feet above sea level
Bottomed in Ashley Formation

LA-33: 0.4 miles E of west quad. border, 3.1 miles N of south quad. border. Surface elevation 16 feet.

TEN MILE HILL BEDS	0-20	Sand, medium-grained, light-gray (0-5) grading down to light-brown, muddy
ASHLEY FM	20-55	Calcarenite, fine-grained, light-brown (20-30) grading down to olive-brown, phosphate pebbles abundant in basal 5 feet
PARKERS FERRY FM	55-90	Calcilutite, light-greenish-gray, soft and sticky

Base of Ten Mile Hill beds: -4 feet below sea level
Base of Ashley Formation: -39 feet below sea level
Bottomed in Parkers Ferry Formation

LA-34: 2.45 miles E of west quad. border, 3.35 miles N of south quad. border. Surface elevation 26 feet.

TEN MILE HILL BEDS	0-20	Sand, fine- to medium-grained, medium-reddish-brown, grayish-orange and light-greenish-gray mottled (0-3) grading down through yellowish-gray and grayish-yellow-green (3-10) to medium-gray with medium-olive-brown mottles, clayey, sparsely micaceous, woody around 14 feet, medium-gray sandy clay lenses present below 10 feet
PENHOLOWAY FM	20-42	Sand, medium- grading down to very coarse grained, medium-gray, shelly, abundant phosphate pebbles about 0.5 cm in diameter in basal 2 feet
ASHLEY FM	42-50	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +6 feet above sea level
Base of Penholoway Formation: -16 feet below sea level
Bottomed in Ashley Formation

LA-35: 2.7 miles E of west quad. border, 3.55 miles N of south quad. border. Surface elevation about 17 feet.

WANDO FM (UPPER MEM)	0-6	Clay, medium-gray, silty, sandy, stiff
PENHOLOWAY FM	6-9	Sand, fine-grained, medium-gray, clayey, loose, shelly
ASHLEY FM	9-25	Calcarenite, fine-grained, olive-green, silty, firm

Base of Wando Formation (upper member): +9 feet above sea level
Base of Penholoway Formation: +8 feet above sea level
Bottomed in Ashley Formation

LA-36: 3.2 miles E of west quad. border, 3.3 miles N of south quad. border. Surface elevation 24 feet.

FILL	0-5	Materials of diverse origin
TEN MILE HILL BEDS	5-12	Sand, fine- to medium-grained, medium-gray, silty, sparsely micaceous, clay stringers (less than 1 cm thick) present, woody from 10-11
	12-14	Clay, dark-yellowish-green and grayish-green mottled, phosphate pebbles 1-2 cm in diameter at base
ASHLEY FM	14-20	Calcarenite, fine-grained, light-yellowish-red to light-yellowish-brown, weathered

Base of Ten Mile Hill beds: +10 feet above sea level
Bottomed in Ashley Formation

LA-37: 3.25 miles E of west quad. border, 3.05 miles N of south quad. border.
Surface elevation 36 feet.

TEN MILE HILL BEDS	0-20	Sand, medium-grained, dark-orange grading through white (0-5) to light-yellowish-brown, clean in upper 5 feet and muddy below that
	20-26	Clay, medium-bluish-green, sandy, stiff, phosphate pebbles at base
ASHLEY FM	26-91	Calcarenite, fine-grained, olive-brown, sand-size phosphate abundant except from 45-70, phosphate pebbles abundant in basal 10 feet
PARKERS FERRY FM	91-100	Calcilutite, medium-greenish-gray, burrows at top filled with phosphate sand from above

Base of Ten Mile Hill beds: +10 feet above sea level
Base of Ashley Formation: -55 feet below sea level
Bottomed in Parkers Ferry Formation

LA-38: 3.2 miles E of west quad. border, 3.2 miles N of south quad. border.
Surface elevation 31 feet.

TEN MILE HILL BEDS	0-6	Clay, medium-greenish-gray, medium-gray, light-brown and medium-reddish-brown mottled, silty
	6-13	Sand, medium-grained, medium-gray with sparse light-brown mottles, clay stringers present from 10-13, medium-bluish-gray to light-bluish-gray, silty
	13-17	Clay, grayish-green to grayish-blue-green, phosphate and some quartz pebbles present about 1-2 cm in diameter
ASHLEY FM	17-20	Calcarenite, fine-grained, grayish-yellow-green, weathered

Base of Ten Mile Hill beds: +14 feet above sea level
Bottomed in Ashley Formation

LA-39: 0.8 miles E of west quad. border, 2.5 miles S of north quad. border. Surface elevation 46 feet.

LADSON FM	0-8	Clay, medium-red, medium-reddish-brown, and medium-gray mottled, silty, sandy
	8-14	Sand, medium-grained, medium-pink and dark-yellowish-orange grading to dark-yellowish-orange, muddy, sparse light-grayish-green clay lenses present
	14-24	Sand, medium-grained, light-yellowish-red, muddy, and clay, light-greenish-gray, silty, interbedded, phosphate pebbles 1-2 cm in diameter in basal 2 feet
ASHLEY FM	24-30	Calcarenite, fine-grained, grayish-olive, quartz sand present

Base of Ladson Formation: +22 feet above sea level
Bottomed in Ashley Formation

LA-40: 0.85 miles E of west quad. border, 1.2 miles S of north quad. border. (S. C. Development Board Charleston Co. Hole-Blanton #2). Surface elevation 45 feet.

LADSON FM	0-14	Sand, medium- to coarse-grained, light-brownish-orange and medium-red, clayey, stiff, interbedded with clay, medium-red and medium-gray mottled
	14-23	Sand, fine-grained, light-brownish-orange to light-brownish-yellow, clayey, silty, soft
ASHLEY FM	23-30	Calcarenite, fine-grained, olive-brown, contains sand-size phosphate

Base of Ladson Formation: +22 feet above sea level
Bottomed in Ashley Formation

LA-41: 2.3 miles E of west quad. border, 1.3 miles S of north quad. border. Surface elevation 12 feet.

WANDO FM	0-5	Sand, fine-grained, dark-brown, clayey, stiff
(UPPER MEM)	5-8	Clay, medium-yellowish-brown, soft, sandy
ASHLEY FM	8-110	Calcarenite, fine-grained, olive-brown, sand-size phosphate locally abundant, large forams abundant around 70 feet

Base of Wando Formation (upper member): +4 feet above sea level
Bottomed in Ashley Formation

LA-42: 3.1 miles E of west quad. border, 1.5 miles S of north quad. border.
(S. C. Development Board Charleston Co. hole-Charleston #14).
Surface elevation 42 feet.

LADSON FM	0-31	Clay, medium-yellowish-brown (0-3.5) grading through medium-red and medium-orangish-red (3.5-16), through medium-greenish-gray to light-greenish-gray (16-27), then to olive-green and light-yellowish green, sandy, plastic, phosphate pebbles at base
ASHLEY FM	31-33.5	Calcarenite, fine-grained, olive-green, shell fragments abundant

Base of Ladson Formation: +11 feet above sea level
Bottomed in Ashley Formation

LA-43: 3.5 miles E of west quad. border, 1.4 miles S of north quad. border.
Surface elevation 42 feet.

LADSON FM	0-26	Sand, fine-grained grading down to medium-grained, medium-red, medium-yellow and medium-gray mottled (0-10) grading down to medium-yellow, clayey with some clay laminae, phosphate pebbles at base
ASHLEY FM	26-35	Calcarenite, fine-grained, olive-green, clayey

Base of Ladson Formation: +16 feet above sea level
Bottomed in Ashley Formation

LA-44: 0.1 miles W of east quad. border, 0.2 miles S of north quad. border.
Surface elevation 15 feet.

FILL	0-5	Materials of diverse origin
WANDO FM	5-9	Clay, medium-gray, stiff
(UPPER MEM)	9-10	Sand, coarse-grained, medium-gray, muddy
ASHLEY FM	10-51	Calcarenite, fine-grained, light-brown (10-23) grading down to olive-brown, abundant large forams, phosphate pebbles in basal foot
PARKERS FERRY FM	51-55	Calcilutite, light-greenish-gray

Base of Wando Formation (upper member): +5 feet above sea level
Base of Ashley Formation: -36 feet below sea level
Bottomed in Parkers Ferry Formation

LA-45: 1.0 miles W of east quad. border, 1.65 miles S of north quad. border.
Surface elevation 33 feet.

TEN MILE HILL BEDS	0-12	Sand, fine- to medium-grained, medium-red, medium-yellow, and medium-gray mottled, clayey
	12-16	Sand, fine- to medium-grained, medium-blue, clayey
	16-36	Sand, fine- to medium-grained, medium-gray (16-19) grading down to medium-green
ASHLEY FM	36-40	Calcarenite, fine-grained, olive-green, clayey

Base of Ten Mile Hill beds: -3 feet below sea level
Bottomed in Ashley Formation

LA-46: 1.0 miles W of east quad. border, 2.9 miles S of north quad. border.
Surface elevation 17 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained, medium-orange, clayey, grades down to:
	5-20	Clay, light-gray with medium-orange mottles grading down to dark-gray, becomes stiffer downward
ASHLEY FM	20-105	Calcarenite, fine-grained, light-brown (20-25) grading down to olive-brown, minor sand-size phosphate, large forams abundant from 65-85, clayey below 85

Base of Ten Mile Hill beds: -3 feet below sea level
Bottomed in Ashley Formation

LA-47: 0.5 miles W of east quad. border, 3.0 miles S of north quad. border.
Surface elevation 17 feet.

TEN MILE HILL BEDS	0-4.5	Clay, medium-blue, massive, fulsome
	4.5-8	Clay, medium-blue, lumpy, contains shells including oyster fragments, phosphate pebbles at base
CHANDLER BRIDGE FM	8-10	Sand, fine-grained, light-gray, silty, contained whale skeleton
ASHLEY FM	10-15	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +9 feet above sea level
Base of Chandler Bridge Formation: +7 feet above sea level
Bottomed in Ashley Formation

LA-48: 1.45 miles W of east quad. border, 1.8 miles N of south quad. border. Surface elevation about 42 feet.

TEN MILE HILL BEDS	0-20	Sand, fine- to medium-grained, medium-yellowish-brown, becomes more micaceous downward
	20-30	Clay, medium-gray, sandy, contains small shell fragments
	30-32	Conglomerate, composed of phosphate pebbles
ASHLEY FM	32-114	Calcarenite, fine-grained, olive-brown, clayey from 92 to 105, abundant sand-size phosphate from 52 to 92 and below 105, sparsely to abundantly shelly from 52-105, phosphate pebble bed in basal 2 feet
PARKERS FERRY FM	114-135	Calcilutite, light-greenish-gray, stiff and plastic

Base of Ten Mile Hill beds: +10 feet above sea level
Base of Ashley Formation: -72 feet below sea level
Bottomed in Parkers Ferry Formation

MONCKS CORNER QUADRANGLE*--
(depths in feet)

MC-1: 2.25 miles W of east quad. border, 3.25 miles N of south quad. border.
Surface elevation 67 feet.

PENHOLOWAY FM	0-5	Sand, coarse-grained, light-gray, poorly sorted, clayey
	5-9	Clay, light-gray, dense, sticky and sand, medium-grained, light-orange, interbedded
	9-16	Sand, medium-grained, medium-yellowish-orange grading down to medium-orange, well sorted, silty
	16-17	Sand, medium-grained, medium-blue, well sorted, silty, shelly including *Mulinia*
ASHLEY FM	17-25	Calcarenite, fine-grained, olive-brown, contains quartz and phosphate sand, some calcite-cemented lumps

Base of Penholoway Formation: +40 feet above sea level
Bottomed in Ashley Formation

MC-2: 3.4 miles E of west quad. border, 2.25 miles N of south quad. border.
Surface elevation 91 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, dark-gray, silty with red clay lenses
	5-8	Clay, medium-gray, dense, sandy
	8-16	Sand, coarse-grained, light-brown grading down to bright medium-orange, poorly sorted, abundant very fine grained heavy minerals and small white clay-balls
	16-22	Clay, bright medium-orange in upper foot but grading rapidly downward to sand, fine-grained, silty, medium-gray with clay lenses by 20 feet, grading to:
	22-35	Clay, medium-blue, micaceous, grading to sand, fine-grained, silty, light-bluish-gray, shelly at 27-35 feet (*Mulinia*, *Dosinia*, *Mercenaria*, other clams, and snails)
	35-41	Clay, medium-blue, dense, contains calcite lumps at top, a few shells and phosphate lumps at base
ASHLEY FM	41-67	Calcarenite, fine-grained, olive-brown, contains quartz and abundant phosphate sand, sporadic calcite-cemented lumps
PARKERS FERRY FM	67-70	Calcilutite, medium-greenish-gray, dense, contains echinoid spines

Base of Penholoway Formation: +50 feet above sea level
Base of Ashley Formation: +24 feet above sea level
Bottomed in Parkers Ferry Formation

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* See also Inden (1976) for more auger logs and detailed sections.

MC-3: 0.3 miles E of west quad. border, 4.45 miles N of south quad. border. Surface elevation 66 feet.

PENHOLOWAY FM	0-7	Sand, medium-grained, medium-reddish-orange and medium-gray mottled, clayey
ASHLEY FM	7-20	Calcarenite, fine-grained, medium-yellowish-brown grading down through light-brown to olive-brown, extensively recrystallized in upper part, but quartz and phosphate sand present and color normal in lower half

Base of Penholoway Formation: +59 feet above sea level
Bottomed in Ashley Formation

MC-4: 1.1 miles E of west quad. border, 3.75 miles N of south quad. border. Surface elevation 60 feet.

PENHOLOWAY FM	0-5	Sand, medium-grained, dark-gray grading down to medium-gray, silty
	5-7	Peat, dark-brown, sandy
ASHLEY FM	7-45	Calcarenite, fine-grained, olive-brown, some quartz sand and abundant phosphate sand below 20 feet, contains calcite-cemented lumps

Base of Penholoway Formation: +53 feet above sea level
Bottomed in Ashley Formation

MC-5: 0.65 miles E of west quad. border, 4.15 miles N of south quad. border. Surface elevation 63 feet.

PENHOLOWAY FM	0-7	Clay, medium-red, sandy
	7-13	Sand, medium-grained, light-gray, poorly sorted, silty
ASHLEY FM	13-20	Calcarenite, fine-grained, light-brown, partially recrystallized, sparse quartz and phosphate sand

Base of Penholoway Formation: +50 feet above sea level
Bottomed in Ashley Formation

MC-6: 0.25 miles E of west quad. border, 0.25 miles S of north quad. border.
Surface elevation 55 feet.

FILL	0-3	Road base
PENHOLOWAY FM	3-7	Clay, medium-gray grading down to medium-blue, sandy
ASHLEY FM	7-25	Calcarenite, fine-grained, olive-brown, some quartz and phosphate sand present
	25-50	Uncertain, badly churned during drilling
CROSS FM	50-91	Calcarenite, light-yellowish-brown, numerous hard ledges made drilling difficult; very phosphatic in basal two feet and bottomed on hard ledge, hole became artesian after auger stems were pulled

Base of Penholoway Formation:	+48 feet above sea level
Base of Ashley Formation:	+18 ± 12 feet above sea level

Bottomed in Cross Formation

MC-7: 0.65 miles E of west quad. border, 0.8 miles S of north quad. border.
Surface elevation 65 feet.

PENHOLOWAY FM	0-7	Clay, medium-reddish-orange grading down to medium-gray gray and medium-reddish-orange mottled, sandy, contains lense of coarse-grained, angular sand, quartz pebbles present at base
ASHLEY FM	7-20	Calcarenite, fine-grained, light-brown grading down to olive-brown by 13 feet, sparse shell fragments, large forams, quartz and phosphate sand grains present

Base of Penholoway Formation: +58 feet above sea level
Bottomed in Ashley Formation

MC-8: 1.4 miles E of west quad. border, 1.7 miles S of north quad. border.
Surface elevation 69 feet.

PENHOLOWAY FM	0-4	Sand, fine-grained, medium-red and medium-gray mottled, stiff, clayey
	4-6	Clay, medium-red and medium-gray mottled, stiff, sandy
	6-8	Sand, coarse-grained, medium-orange, granular
	8-16	Clay, dark-brown, micaceous, sandy
ASHLEY FM	16-20	Calcarenite fine-grained, light-brown, partially recrystallized, sand-size phosphate abundant

Base of Penholoway Formation: +53 feet above sea level
Bottomed in Ashley Formation

MC-9: 3.0 miles E of west quad. border, 3.55 miles S of north quad. border.
Surface elevation 68 feet.

PENHOLOWAY FM	0-5	Clay, dark-gray, humic
	5-7	Clay, medium-gray, stiff
	7-9	Sand, coarse-grained, bright medium-orange, poorly sorted, silty
	9-14	Clay, medium-gray, stiff, sandy, contains coarse-grained sand lenses
ASHLEY FM	14-20	Calcarenite, fine-grained, light-brown, partially recrystallized

Base of Penholoway Formation: +54 feet above sea level
Bottomed in Ashley Formation

MC-10: 0.9 miles W of east quad. border, 1.05 miles N of south quad. border.
Surface elevation 20 feet.

TEN MILE HILL BEDS	0-7	Clay, medium-brownish-gray, sandy, stiff
PARKERS FERRY FM	7-15	Calcilutite, medium-orange and light-brown grading down to medium-bluish-green, very stiff

Base of Ten Mile Hill beds: +13 feet above sea level
Bottomed in Parkers Ferry Formation

MC-11: 1.85 miles W of east quad. border, 2.35 miles N of south quad. border. Surface elevation 40 feet.

LADSON FM	0-4	Sand, medium-grained, medium-gray, contains iron-hydroxide-cemented lumps
	4-6	Sand, medium-grained, medium-gray, angular, poorly sorted, clayey
ASHLEY FM	6-53	Calcarenite, fine-grained, light-brown in upper three feet and grading to olive-brown, quartz and phosphate sand abundant
PARKERS FERRY FM	53-70	Calcilutite, medium-bluish-green, contains echinoid spines

Base of Ladson Formation: +36 feet above sea level
Base of Ashley Formation: -13 feet below sea level
Bottomed in Parkers Ferry Formation

MC-12: 1.5 miles W of east quad. border, 1.55 miles N of south quad. border. Surface elevation 48 feet.

LADSON FM	0-7	Sand, medium-grained, medium-reddish-orange, medium-red, light-gray, and medium-gray mottled, angular, dense, clayey, contains sparse quartz granules in basal two feet
PARKERS FERRY FM	7-25	Calcilutite, medium-orange and medium-bluish-green mottled grading down by 15 feet to medium-bluish-green, contains echinoid spines

Base of Ladson Formation: +41 feet above sea level
Bottomed in Parkers Ferry Formation

MC-13: 2.9 miles W of east quad. border, 1.85 miles N of south quad. border. Surface elevation 71 feet.

PENHOLOWAY FM	0-5	Sand, coarse-grained, medium-red, moderately well rounded, clayey, contains iron hydroxide-cemented nodules
	5-6	Clay, medium-gray and medium-red mottled
	6-17	Sand, coarse-grained, medium-orange, angular, poorly sorted, silty, very fine grained heavy minerals abundant
	17-23	Clay, medium-blue, greasy, bed of phosphate pebbles at base
ASHLEY FM	23-42	Calcarenite, fine-grained, olive-brown, quartz sand present and phosphate sand abundant
PARKERS FERRY FM	42-45	Calcilutite, medium-bluish-green, contains echinoid spines, upper foot contains burrows filled with overlying material

Base of Penholoway Formation: +48 feet above sea level
Base of Ashley Formation: +29 feet above sea level
Bottomed in Parkers Ferry Formation

MC-14: 3.1 miles W of east quad. border, 1.1 miles N of south quad. border. Surface elevation 65 feet.

PENHOLOWAY	0-25	Sand, medium- to coarse-grained, medium-reddish-orange (0-4) grading to light-gray, well sorted, moderately angular, silty, contains sand-size phosphate
PARKERS FERRY FM	25-35	Calcilutite, medium-bluish-green, contains echinoid spines

Base of Penholoway Formation: +40 feet above sea level
Bottomed in Parkers Ferry Formation

MC-15: 0.95 miles E of west quad. border, 1.15 miles N of south quad. border. Surface elevation 84 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, medium-gray, well sorted, tightly packed, grades to:
	5-9	Sand, fine-grained, medium-gray, poorly sorted, micaceous
	9-11	Clay, medium-gray, sticky, contains wood fragments
	11-26	Sand, fine-grained, medium-gray, silty
	26-34	Sand, fine-grained, medium-gray, silty, denser than above, shelly (including *Mulinia* and *Argopecten eboreus*)
ASHLEY FM	34-40	Calcarenite, fine-grained, light-brown grading down to medium-brown, quartz and phosphate sand present, calcite-cemented lumps scattered throughout

Base of Penholoway Formation: +50 feet above sea level
Bottomed in Ashley Formation

MC-16: 2.3 miles E of west quad. border, 0.45 miles N of south quad. border. Surface elevation 91 feet.

PENHOLOWAY	0-5	Sand, fine-grained, medium-reddish-orange grading down to light-gray, well sorted, rounded iron hydroxide-cemented nodules in upper 3 feet, grades to:
	5-16	Sand, medium-grained, light-gray (5-8) grading to medium-orangish-red, poorly sorted but skewed toward coarse-grained, very fine grained heavy minerals abundant
	16-28	Clay, medium-gray (16-17) grading down to medium-bluish-gray, silty, greasy, sandy in basal two feet
	28-49	Sand, fine-grained, medium-bluish-gray, denser than clay above, clayey, shelly (including *Mulinia*, *Mercenaria*, and oyster)
ASHLEY FM	49-50	Calcarenite, fine-grained, olive-brown, contains quartz and phosphate sand

Base of Penholoway Formation: +42 feet above sea level
Bottomed in Ashley Formation

MC-17: 2.7 miles E of west quad. border, 1.55 miles N of south quad. border.
Surface elevation 88 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, medium-reddish-orange grading down to light-gray, well sorted
	5-6	Clay, light-gray, sandy
	6-12	Sand, fine- to medium-grained, white, poorly sorted, micaceous, very fine grained heavy minerals sprinkled throughout
	12-18	Clay, dark-gray, silty, shell lense at 15 feet
	18-29	Sand, fine-grained, dark-gray, silty, shelly (*Mulinia* and others)
	29-58	Clay, dark-gray, sandy, less shelly than above, micaceous, sparse wood fragments present
	58-66	Sand, fine-grained, medium-gray, sparse shell and wood fragments, no basal phosphate bed
PARKERS FERRY FM	66-70	Calcilutite, light-yellowish-green, friable, tough

Base of Penholoway Formation: +22 feet above sea level
Bottomed in Parkers Ferry Formation

MC-18: 1.1 miles E of west quad. border, 2.95 miles S of north quad. border.
Surface elevation 68 feet.

PENHOLOWAY FM	0-3	Clay, medium-yellowish-orange, sandy
	3-7	Sand, medium-grained, medium-yellowish-orange, clayey
	7-11	Clay, medium-reddish-orange, contains quartz pebbles
ASHLEY FM	11-15	Calcarenite, fine-grained, light-brown, sparse quartz and phosphate sand present, partially recrystallized

Base of Penholoway Formation: +57 feet above sea level
Bottomed in Ashley Formation

MC-19: 3.3 miles E of west quad. border, 3.9 miles N of south quad. border. Surface elevation 75 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, medium-gray, medium-red, medium-orange and medium-yellow mottled, clayey
	5-11	Clay, medium-bluish-gray, sandy, dense, micaceous, contains hard green lumps
	11-20	Sand, medium-grained, medium-bluish-gray, poorly sorted
	20-24	Clay, dark-gray, dense, micaceous, contains green lumps and sand-filled burrows
ASHLEY FM	24-25	Calcarenite, fine-grained, light-brown, contains quartz and phosphate sand, calcite-cemented lumps

Base of Penholoway Formation: +51 feet above sea level
Bottomed in Ashley Formation

MC-20: 2.15 miles E of west quad. border, 0.7 miles S of north quad. border. Surface elevation 78 feet.

PENHOLOWAY FM	0-6	Sand, fine-grained, medium-reddish-orange and light-gray mottled, clayey, dense
	6-12	Clay, medium-orange, medium-gray, and medium-pink mottled, dense, sticky
	12-16	Clay, medium-gray, greasy
	16-22	Clay, dark-gray, semi-indurated, breaks into angular lumps, sparse shell fragments in basal foot
ASHLEY FM	22-30	Calcarenite, fine-grained, light-brown grading down to olive-brown, contains quartz and phosphate sand

Base of Penholoway Formation: +56 feet above sea level
Bottomed in Ashley Formation

MC-21: 1.1 miles W of east quad. border, 1.6 miles S of north quad. border. Surface elevation 75 feet.

PENHOLOWAY FM	0-7	Sand, fine-grained, medium-orange, well sorted
	7-25	Clay, medium-red, silty, micaceous, dark-gray lens at 22 feet, sandy below that point
ASHLEY FM	25-30	Calcarenite, fine-grained, light-brown grading down to medium-brown, quartz and phosphate sand present

Base of Penholoway Formation: +50 feet above sea level
Bottomed in Ashley Formation

MC-22: 0.55 miles W of east quad. border, 2.25 miles S of north quad. border.
Surface elevation 63 feet.

PENHOLOWAY FM	0-5	Sand, fine- to medium-grained, medium-orange and medium-gray mottled, poorly sorted, subangular, clayey, micaceous, dense
	5-16	Clay, medium-green, sandy, sand grains range from fine at top to coarse and angular at base
ASHLEY FM	16-20	Calcarenite, fine-grained, light-brown grading down to medium-brown, sparse quartz and phosphate sand, partially recrystallized

Base of Penholoway Formation: +47 feet above sea level
Bottomed in Ashley Formation

MC-23: 1.85 miles E of west quad. border, 3.9 miles N of south quad. border.
Surface elevation 75 feet.

PENHOLOWAY FM	0-9	Sand, fine-grained, clayey grading down to clay, sandy, medium-reddish-pink and medium-gray mottled, grading to mostly medium-gray downward
	9-21	Sand, fine-grained, medium-orangish-red, clayey
ASHLEY FM	21-25	Calcarenite, fine-grained, light-brown, sparse quartz and phosphate sand present

Base of Penholoway Formation: +54 feet above sea level
Bottomed in Ashley Formation

MC-24: 0.85 miles E of west quad. border, 2.9 miles N of south quad. border.
Surface elevation 77 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, light-gray, clayey
	5-12	Clay, light-gray and medium-orange mottled, sandy in upper part with some coarse grains, stiffens toward base
	12-24	Sand, medium-grained, medium-orangish-red grading downward to medium-gray by 17 feet and to medium-bluish-gray by 20 feet, angular
ASHLEY FM	24-25	Calcarenite, fine-grained, light-brown, quartz and phosphate sand present, partially recrystallized

Base of Penholoway Formation: +53 feet above sea level
Bottomed in Ashley Formation

MC-25: 1.55 miles W of east quad. border, on south quad. border. Surface Surface elevation 25 feet.

TEN MILE HILL BEDS	0-5	Clay, medium-red and medium-gray mottled, sandy, stiff
	5-8	Sand, medium-grained, medium-red and medium-gray mottled, clayey
PARKERS FERRY FM	8-25	Calcilutite, medium-bluish-green

Base of Ten Mile Hill beds: +17 feet above sea level
Bottomed in Parkers Ferry Formation

MC-26: On east quad. border, 0.8 miles N of south quad. border. Surface elevation 8 feet.

SILVER BLUFF	0-9	Clay, medium-reddish-orange and medium-gray mottled, sandy, stiff, phosphate lumps present at base
PARKERS FERRY FM	9-15	Calcilutite, light-green grading down to medium-bluish-green and medium-brown mottled

Base of Silver Bluff (Holocene): -1 foot below sea level
Bottomed in Parkers Ferry Formation

MC-27: 0.5 miles W of east quad. border, 0.95 miles N of south quad. border.
Surface elevation 10 feet.

WANDO FM (UPPER MEM)	0-4	Clay, medium-gray, sandy, stiff
	4-8	Sand, fine-grained, medium-gray, well sorted except for basal foot which includes quartz granules
PARKERS FERRY FM	8-15	Calcilutite, medium-bluish-green and medium-greenish-gray mottled, contains echinoid spines, upper foot contains carbonized roots

Base of Wando Formation (upper member): +2 feet above sea level
Bottomed in Parkers Ferry Formation

MC-28: 0.15 miles W of east quad. border, 1.55 miles N of south quad. border.
Surface elevation 15 feet.

WANDO FM (UPPER MEM)	0-3	Sand, medium-grained, light-gray, well sorted
	3-13	Clay, medium-gray and medium-orange mottled, sandy, grading down to sand, medium-grained, medium-gray, silty
ASHLEY FM	13-65	Calcarenite, fine-grained, light-brown (13-18) grading to olive-brown, forams abundant, sparse quartz and phosphate sand present

Base of Wando Formation (upper member): +2 feet above sea level
Bottomed in Ashley Formation

MC-29: 2.0 miles E of west quad. border, 2.4 miles N of south quad. border.
Surface elevation 80 feet.

PENHOLOWAY FM	0-13	Sand, medium-grained, medium-orange grading down to dark-yellowish-orange, clayey
	13-28	Clay and sand, fine-grained, interbedded, medium-gray to dark-greenish gray, micaceous
	28-43	Sand, fine-grained, dark-greenish-gray, slightly clayey, shelly below 36 feet
	43-52	Sand, medium- to coarse-grained, medium-gray, clayey, phosphate and glauconite sand abundant; phosphate pebbles up to 1 cm in diameter and some shells present in basal foot
PARKERS FERRY FM	at 52	Calcilutite, medium-greenish-gray, barely penetrated on the end of the last stem

Base of Penholoway Formation: +28 feet above sea level
Bottomed on Parkers Ferry Formation

MC-30: 3.55 miles W of west quad. border, 3.7 miles S of north quad. border. Surface elevation about 73 feet.

FILL	0-3	Road base
PENHOLOWAY FM	3-4	Sand, medium-grained, medium-gray, clayey, micaceous
	4-8	Clay, white, medium-gray and medium-bluish-gray, some minor fine-grained sand lenses present, clayey, micaceous
	8-12	Clay, medium-grayish-green, some burrows filled with fine-grained sand present, micaceous; contains waxy, dry, hard, medium-green, clay lumps
	12-14.5	Clay, medium-grayish-green, grading down to sand, fine-through medium-grained, minor amounts of wood present, micaceous
	14.5-18	Sand, coarse-grained, medium-greenish-gray, clean, micaceous, contains pebbles up to 1.5 cm in diameter of dark-greenish-gray, waxy clay toward the base
CHANDLER BRIDGE FM	18-24	Clay, medium-grayish-green, contains burrows filled with medium-gray, clean, fine-grained sand
ASHLEY FM	24-25	Calcarenite, fine-grained, light-brown, biocalcarenitic, calcite-cemented lumps up to 1.5 cm in diameter

Base of Penholoway Formation: +55 feet above sea level
Base of Chandler Bridge Formation: +49 feet above sea level
Bottomed in Ashley Formation

MOUNT HOLLY QUADRANGLE
(Depths in feet)

MH-1: 3.65 miles E of west quad. border, 2.45 miles N of south quad. border. Surface elevation 45 feet.

LADSON FM	0-4	Clay, medium-red, sandy, stiff
	4-8	Sand, medium-grained, silty, medium-yellowish-orange, muscovite flakes present
	8-16	Sand, medium- to coarse-grained, silty, light-orange, muscovite flakes present, lenses of medium-brown clay present below 12 feet; no phosphate pebble bed at base
CHANDLER BRIDGE(?) FM	16-17	Clay, sticky, dark-yellowish-brown
ASHLEY FM	17-25	Calcarenite, fine-grained, light-brown grading down to olive-brown, phosphatic

Base of Ladson Formation: +29 feet above sea level
Base of Chandler Bridge(?) Formation: +28 feet above sea level
Bottomed in Ashley Formation

MH-2: 2.3 miles W of east quad. border, 2.1 miles N of south quad. border. Surface elevation 22 feet.

WANDO FM (UPPER MEM)	0-2	Sand, medium-grained, medium-gray, clayey
PARKERS FERRY FM	2-15	Calcilutite, stiff, medium-orange and medium-bluish-gray mottled

Base of Wando Formation (upper member): +20 feet above sea level
Bottomed in Parkers Ferry Formation

MH-3: 3.0 miles W of east quad. boundary, 2.25 miles N of south quad. boundary. Surface elevation 32 feet.

LADSON FM	0-5	Sand, medium-grained, light-brown
ASHLEY FM	5-30	Calcarenite, fine-grained, light-gray to light-brown grading down to light-brown and olive-brown mottled, sparsely phosphatic

Base of Ladson Formation: +27 feet above sea level
Bottomed in Ashley Formation

MH-4: 3.75 miles E of west quad. border, 2.70 miles S of north quad. border. Surface elevation 50 feet.

LADSON FM	0-10	Sand, medium-grained, medium-gray and medium-orange mottled, loamy
PARKERS FERRY FM	10-25	Calcilutite, medium-bluish-gray and medium-orange mottled, sticky, stiff

Base of Ladson Formation: +40 feet above sea level
Bottomed in Parkers Ferry Formation

MH-5: 2.4 miles W of east quad. border, 3.6 miles S of north quad. border. Surface elevation 31 feet.

TEN MILE HILL BEDS	0-4	Clay, medium-gray, noncalcareous
	4-10	Sand, coarse-grained, black
PARKERS FERRY FM	10-15	Clay, silty, medium-bluish-green with dark-green lumps, not calcareous (weathered)
	15-25	Calcilutite, light-gray, stiff

Base of Ten Mile Hill beds: +21 feet above sea level
Bottomed in Parkers Ferry Formation

MH-6: 3.6 miles E of west quad. border, 4.2 miles N of south quad. border. Surface elevation 43 feet.

LADSON FM	0-4	Clay, sandy, medium-gray and medium-orange mottled, loamy
	4-5	Phosphate pebble bed
ASHLEY FM	5-20	Calcarenite, fine-grained, medium-brown (5-7) grading down to light-brown (7-18) grading down to olive-brown (18-20), phosphatic, abundant calcite lumps from 7-18 feet

Base of Ladson Formation: +38 feet above sea level
Bottomed in Ashley Formation

MH-7: 3.4 miles W of east quad. border, 3.85 miles S of north quad. border. Surface elevation 44 feet (spot elevation mark).

LADSON FM	0-10	Clay, sandy, medium-orange grading to medium-orange and medium-gray mottled, muscovitic, no pebble bed at base
ASHLEY FM	10-26	Calcarenite, fine-grained, medium-brown grading down to olive-brown, slightly phosphatic
	at 26	Impenetrable hard bed, probably basal phosphate gravel bed

Base of Ladson Formation: +34 feet above sea level
Base of Ashley Formation: +18 feet above sea level

MH-8: 2.9 miles W of east quad. border, 4.1 miles S of north quad. border. Surface elevation 27 feet.

TEN MILE HILL BEDS?	0-2	Clay, medium-blue, numerous phosphate pebbles and molds of corals phosphatized, white calcite lumps present
PARKERS FERRY FM	2-10	Calcilutite, medium-orange and medium-bluish-gray mottled

Base of Ten Mile Hill beds?: +25 feet above sea level (this could be entirely a soil developed on the Parkers Ferry)
Bottomed in Parkers Ferry Formation

MH-9: 3.45 miles W of east quad. border, 3.05 miles N of south quad. border. Surface elevation 41 feet.

LADSON FM	0-10	Clay, sandy, medium-orange to medium-gray, a few scattered quartz granules and pebbles present
ASHLEY FM	10-20	Calcarenite, fine-grained, white grading down to medium-brown, many calcite lumps at around 15 feet

Base of Ladson Formation: +31 feet above sea level
Bottomed in Ashley Formation

MH-10: 2.95 miles W of east quad. border, 2.7 miles N of south quad. border.
Surface elevation 16 feet.

WANDO FM (UPPER MEM)	0-2	Sand, clayey, medium-bluish-gray, phosphate lumps abundant
ASHLEY FM	2-27	Calcarenite, fine-grained, white grading down to olive-brown by 10 feet, phosphatic, phosphate pebble bed at base (not penetrated)

Base of Wando Formation (upper member): +14 feet above sea level
Base of Ashley Formation: -11 feet below sea level

MH-11: 2.8 miles W of east quad. border, 3.45 miles N of south quad. border.
Surface elevation 31 feet.

TEN MILE HILL BEDS	0-12	Clay, contains scattered coarse sand grains, dark-gray, noncalcareous
ASHLEY FM	12-20	Calcarenite, fine-grained, light-brown grading down to olive-green

Base of Ten Mile Hill beds: +19 feet above sea level
Bottomed in Ashley Formation

MH-12: 2.5 miles W of east quad. border, 1.35 miles N of south quad. border.
Surface elevation 40 feet.

LADSON FM	0-9	Clay, sandy, medium-orange, very muscovitic
	9-18	Clay, silty in upper 6 feet, massive in lower 3 feet, medium-gray
ASHLEY FM	18-30	Calcarenite, fine-grained, light-gray (18-21) grading down to olive-brown

Base of Ladson Formation: +22 feet above sea level
Bottomed in Ashley Formation

MH-13: 1.55 miles W of east quad. border, 0.75 miles N of south quad. border. Surface elevation about 25 feet.

TEN MILE HILL BEDS	0-5	Clay, gray, sandy and loamy
ASHLEY FM	5-25	Calcarenite, fine-grained, weathered, grades from medium-orangish-brown down through light-brown to olive-green by 15 feet down

Base of Ten Mile Hill beds: +20 feet above sea level
Bottomed in Ashley Formation

MH-14: 0.25 miles W of east quad. border, 1.1 miles N of south quad. border. Surface elevation 25 feet.

TEN MILE HILL BEDS	0-5	Clay, medium-bluish-gray, coarse angular sand grains scattered throughout
	5-8.5	Silt, sandy, medium-orange, coarse sand grains scattered throughout; below 6 feet are many rounded to subangular phosphate pebbles up to 1 cm in diameter and one quartz discoid 5 cm in diameter
ASHLEY FM	8.5-10.5	Calcarenite, fine-grained, medium-orange, medium-gray and medium-bluish-green mottled
	10.5-28	Calcarenite, fine-grained, light-brown (10.5-20) grading down to olive-brown, contains calcite-cemented lumps

Base of Ten Mile Hill beds: +16 feet above sea level
Bottomed in Ashley Formation

MH-15: 0.55 miles W of east quad. border, 1.9 miles N of south quad. border. Surface elevation 32 feet.

TEN MILE HILL BEDS	0-10	Clay, medium bluish-gray with medium-orange mottles, coarse sand grains and muscovite flakes scattered throughout
	10-12	Sand, coarse-grained, medium-orange, angular
	12-15	Clay, dark-gray, muscovitic, and silt, dark-gray, sandy, interbedded, basal bed dark-gray clay
ASHLEY FM	15-25	Calcarenite, fine-grained, light-brown grading down to olive-brown, phosphatic

Base of Ten Mile Hill beds: +17 feet above sea level
Bottomed in Ashley Formation

MH-16: 0.85 miles W of east quad. border, 1.3 miles N of south quad. border. Surface elevation 37 feet.

LADSON FM	0-10	Clay, medium-red and medium-gray mottled, scattered coarse sand grains and muscovite flakes present
	10-11	Clay, medium-gray, coarse angular sand grains scattered throughout
	11-13	Sand, fine-grained, silty, medium-yellowish-orange, muscovitic, grades rapidly to:
	13-16	Sand, coarse-grained, medium-yellowish-orange, silty, loosely packed
	16-18	Sand, coarse-grained, white, clean
CHANDLER BRIDGE FM	18-18.5	Clay, medium-brown, soft
	18.5-19	Clay, medium-green, soft
ASHLEY FM	19-25	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation: +19 feet above sea level
Base of Chandler Bridge Formation: +18 feet above sea level
Bottomed in Ashley Formation

MH-17: 0.8 miles W of east quad. boundary, 0.25 miles N of south quad. boundary. Surface elevation 9 feet.

SILVER BLUFF	0-4	Sand, medium-grained, medium-orange and medium-gray mottled, clayey, loamy
	4-10	Clay, medium-gray, coarse sand grains and pebbles scattered throughout
WANDO FM (UPPER MEM)	10-12	Clay, medium-gray, sparsely micaceous, wavy laminations present
ASHLEY FM	12-20	Calcarenite, fine-grained, light-brown (12-14) grading down to olive-brown and sparsely phosphatic

Base of Silver Bluff (Holocene): -1 foot below sea level
Base of Wando Formation (upper member): -3 feet below sea level
Bottomed in Ashley Formation

MH-18: 0.5 miles W of east quad. border, 1.1 miles N of south quad. border. Surface elevation 9 feet.

FILL	0-2	Road base underlain by soil
ASHLEY FM	2-15	Calcarenite, fine-grained, light-brown (2-8), grading down to olive-brown, sparsely phosphatic

Base of fill: +7 feet above sea level
Bottomed in Ashley Formation

MH-19: 0.95 miles W of east quad. border, 2.75 miles N of south quad. border.
Surface elevation 12 feet.

FILL	0-1	Road base underlain by soil
PARKERS FERRY FM	1-15	Calcilutite, medium-bluish-green with medium-orange mottles (1-5) grading down to medium-bluish-green, echinoid spines abundant

Base of fill: +11 feet above sea level
Bottomed in Parkers Ferry Formation

MH-20: 3.6 miles W of east quad. border, 3.95 miles N of south quad. border.
Surface elevation 20 feet.

FILL	0-2	Road base
ASHLEY FM	2-27	Calcarenite, fine-grained, olive-brown, phosphate pebble bed at base
PARKERS FERRY FM	27-35	Calcilutite, medium-blue, echinoid spines abundant

Base of Ashley Formation: -7 feet below sea level
Bottomed in Parkers Ferry Formation

MH-21: 3.15 miles W of east quad. border, 4.0 miles S of north quad. border.
Surface elevation 20 feet.

WANDO FM	0-5	Clay, medium-bluish-gray, sandy
(UPPER MEM)	5-7	Sand, coarse-grained, light-gray, clean, pebbly at base
PARKERS FERRY FM	7-20	Calcilutite, light-brown and medium-orange mottled (5-7 feet) grading through medium-bluish-green, medium-brown, and medium-orange mottled (7-18) to medium-bluish-green, echinoid spines abundant

Base of Wando Formation (upper member): +13 feet above sea level
Bottomed in Parkers Ferry Formation

MH-22: 2.0 miles W of east quad. border, 2.65 miles N of south quad. border. Surface elevation 45 feet.

LADSON FM	0-10	Clay, medium-orange and medium-gray mottled, loamy, scattered coarse sand grains
	10-13	Sand, coarse-grained, medium-orange, silty
CHANDLER BRIDGE FM	13-13.5	Clay, dark-brown, silty, non-calcareous
ASHLEY FM	13.5-25	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation: +32 feet above sea level
Base of Chandler Bridge Formation: +31 feet above sea level
Bottomed in Ashley Formation

MH-23: 2.35 miles W of east quad. border, 2.7 miles N of south quad. border. Surface elevation 19 feet.

PARKERS FERRY FM	0-10	Calcilutite, medium-bluish-green with medium-brown and medium-orange mottles, contains echinoid spines

Bottomed in Parkers Ferry Formation

MH-24: 2.65 miles W of east quad. border, 2.2 miles N of south quad. border (0.3 miles W of MH 23). Surface elevation 14 feet.

ASHLEY FM	0-15	Calcarenite, fine-grained, light-brown grading down to olive-brown

Bottomed in Ashley Formation

MH-25: 2.5 miles W of east quad. border, 2.7 miles N of south quad. border, 0.175 miles E of MH 24. Surface elevation about 23 feet.

TEN MILE HILL BEDS	0-3	Sand, coarse-grained, medium-reddish-brown, clayey, loamy
PARKERS	3-15	Calcilutite, medium-orange and medium-bluish-gray mottled (3-5 feet) grading to medium-bluish-gray with sparse medium-brown and medium-orange mottles, contains echinoid spines

Base of Ten Mile Hill beds: +20 feet above sea level
Bottomed in Parkers Ferry Formation

MH-26: 2.6 miles W of east quad. border, 2.7 miles N of south quad. border (0.10 miles W of MH 25). Surface elevation 14 feet.

ASHLEY FM	0-10	Calcarenite, fine-grained, light-brown grading down to olive-brown

Bottomed in Ashley Formation

MH-27: Located 200 feet west of MH-25. Surface elevation 20 feet.

PARKERS FERRY FM	0-10	Calcilutite, medium-bluish-green, contains echinoid spines

Bottomed in Parkers Ferry Formation

MH-28: Located 100 feet west of MH-27. Surface elevation 16 feet.

ASHLEY FM	0-20	Calcarenite, fine-grained, light-brown grading down to olive-brown. Phosphate pebble bed at base (a wisp of dry, blue-green powder recovered on end of bit). Pebble bed not penetrated

Base of Ashley Formation: -4 feet below sea level

MH-29: Located 50 feet east of MH 28. Surface elevation 18 feet.

TEN MILE HILL BEDS	0-3	Clay, medium-orange, sandy
ASHLEY FM	3-10	Calcarenite, fine-grained, light-brown grading down to olive brown
PARKERS FERRY FM	10-25	Calcilutite, medium-bluish-green, contains echinoid spines

Base of Ten Mile Hill beds: +15 feet above sea level
Base of Ashley Formation: +8 feet above sea level
Bottomed in Parkers Ferry Formation

MH-30: Located 25 feet west of MH-29. Surface elevation 17 feet.

ASHLEY FM	0-15	Calcarenite, fine-grained, olive-brown
PARKERS FERRY FM	15-25	Calcilutite, meidum-bluish-green, echinoid spines present, a single 1 cm diameter phosphate pebble at the upper contact

Base of Ashley Formation: +2 feet above sea level
Bottomed in Parkers Ferry Formation

MH-31: 2.2 miles W of east quad. border, 2.65 miles N of south quad. border. Surface elevation 40 feet.

LADSON FM	0-5	Clay, medium-orange and medium-gray mottled, medium to coarse sand grains scattered within it, loamy
	5-10	Sand, medium-grained, silty and clayey, medium-orange, loosely packed, muscovitic, occasional small pebbles present
	10-11.5	Sand, coarse-grained, medium-orange, numerous rounded pebbles near base
ASHLEY FM	11.5-15	Calcarenite, fine-grained, light-gray grading down to olive-green

Base of Ladson Formation: +28 feet above sea level
Bottomed in Ashley Formation

MH-32: Located half way between MH-31 and MH-23. Surface elevation about 20 feet.

PARKERS FERRY FM	0-10	Calcilutite, medium-bluish-green to medium-gray, echinoid spines present

Bottomed in Parkers Ferry Formation

MH-33: Located 200 feet west of MH 31. Surface elevation about 25 feet.

LADSON FM	0-6.5	Sand, coarse-grained, medium-orange
	6.5-7.5	Clay, medium-gray, sandy
ASHLEY FM	7.5-8	Phosphate pebble bed with calcarenite matrix, fine-grained, olive-brown
PARKERS FERRY FM	8-11	Calcilutite, medium-bluish-gray

Base of Ladson Formation: +17.5 feet above sea level
Base of Ashley Formation: +17 feet above sea level
Bottomed in Parkers Ferry Formation

MH-34: Located 50 feet east of MH-33 and 150 feet west of MH-31. Surface elevation about 27 feet.

LADSON FM	0-5	Clay, medium-gray, scattered coarse sand grains present
	5-9	Sand, medium-grading down to coarse-grained, medium-gray
CHANDLER BRIDGE FM	9-10	Clay, medium-gray, noncalcareous
ASHLEY FM	10-10.5	Calcarenite, fine-grained, light-brown
	10.5-11	Phosphate pebble bed

Base of Ladson Formation:	+18 feet above sea level
Base of Chandler Bridge Formation:	+17 feet above sea level
Base of Ashley Formation:	+16 feet above sea level

MH-35: 1.55 miles W of east quad. border, 2.6 miles N of south quad. border. Surface elevation about 32 feet.

TEN MILE HILL BEDS	0-7	Clay, medium-orange, sandy near the top, no basal sand or pebble bed
ASHLEY FM	7-15	Calcarenite, fine-grained, light-brown grading down to medium-brown

Base of Ten Mile Hill beds: +25 feet above sea level
Bottomed in Ashley Formation

MH-36: 1.25 miles W of east quad. border, 2.55 miles N of south quad. border.
Surface elevation 30 feet.

TEN MILE HILL BEDS	0-5	Clay, medium-orange, sandy
ASHLEY FM	5-14	Calcarenite fine-grained, light-brown
	14-15	Phosphate pebble bed
PARKERS FERRY FM	15-20	Calcilutite, medium-bluish-gray, echinoid spines abundant

Base of Ten Mile Hill beds: +25 feet above sea level
Base of Ashley Formation: +15 feet above sea level
Bottomed in Parkers Ferry Formation

MH-37: Located 70 feet west of MH-36. Surface elevation about 30 feet.

	0-12	Went through Pleistocene and Ashley, phosphate pebble bed marking Ashley/Parkers Ferry contact encountered at 12 feet but not penetrated. Not otherwise logged.

Base of Ashley Formation: +18 feet elevation

MH-38: 1.9 miles W of east quad. border, 2.6 miles N of south quad. border.
Surface elevation 46 feet.

	0-30	Not logged. Basal Ashley/Parkers Ferry phosphate bed encountered at 30 feet but not penetrated

Base of Ashley Formation: +16 feet above sea level

MH-39: 2.35 miles W of east quad. border, 1.9 miles N of south quad. border.
Surface elevation about 35 feet.

LADSON FM	0-13	Sand, medium-grained grading down to coarse-grained, medium-orange, muscovitic, many rutile grains between 5-10 feet, pebbly toward base
CHANDLER BRIDGE FM	13-15	Silt, medium-gray, soft, clayey
ASHLEY FM	15-20	Calcarenite, fine-grained, light-brown grading rapidly down to olive-brown

Base of Ladson Formation: +22 feet above sea level
Base of Chandler Bridge Formation: +20 feet above sea level
Bottomed in Ashley Formation

MH-40: 2.8 miles W of east quad. border, 3.7 miles N of south quad. border.
Surface elevation 12 feet.

WANDO FM (UPPER MEM)	0-3	Soil and gray clay, road fill in part
ASHLEY FM	3-10	Calcarenite, fine-grained, olive-brown, phosphate pebble bed at base
PARKERS FERRY FM	10-15	Calcilutite, medium-bluish-gray, contains echinoid spines

Base of Wando Formation (upper member): +9 feet above sea level
Base of Ashley Formation: +2 feet above sea level
Bottomed in Parkers Ferry Formation

MH-41: 3.6 miles E of west quad. border, 1.8 miles S of north quad. border.
Surface elevation 53 feet.

LADSON FM	0-6	Sand, medium-grained, light-gray, clayey, grades rapidly to:
	6-15	Sand, medium-grained, medium-orange and light-gray mottled, gravelly in basal 2 feet, including some phosphatized coral and gastropod molds
CHANDLER BRIDGE FM	15-15.5	Sand, fine-grained, medium-gray, silty, contains small phosphate lumps
ASHLEY FM	15.5-18	Calcarenite, fine-grained, light-gray
	18-19	Phosphate pebble bed
PARKERS FERRY FM	19-22	Calcilutite, medium-bluish-green, contains echinoid spines

Base of Ladson Formation: +38 feet above sea level
Base of Chandler Bridge Formation: +37 feet above sea level
Base of Ashley Formation: +34 feet above sea level
Bottomed in Parkers Ferry Formation

MH-42: 3.3 miles E of west quad. border, 1.3 miles S of north quad. border. Surface elevation 58 feet.

PENHOLOWAY FM	0-8	Sand, medium-grained, medium-orange with medium-gray mottles, well sorted, coarsens downward
	8-10	Clay, medium-gray, contains hard medium-green lumps
	10-19	Clay, medium-blue, contains hard medium-green clay lumps, muscovitic, very sandy in basal foot
ASHLEY FM	19-31	Calcarenite, fine-grained, olive-brown
	31-32	Phosphate pebble bed
PARKERS FERRY FM	32-35	Calcilutite, medium-bluish-green, echinoid spines abundant

Base of Penholoway Formation: +39 feet above sea level
Base of Ashley Formation: +26 feet above sea level
Bottomed in Parkers Ferry Formation

MH-43: Located 500 feet W of MH-24. Surface elevation 13 feet.

WANDO FM (UPPER MEM)	0-3	Clay, dark-gray, soft, greasy, rich in organic matter
ASHLEY FM	3-25	Calcarenite, fine-grained, white in upper two feet and olive-brown below that, phosphate bed and clam shells at base
PARKERS FERRY FM	25-35	Calcilutite, medium-bluish-green

Base of Wando Formation (upper member): +10 feet above sea level
Base of Ashley Formation: -12 feet below sea level
Bottomed in Parkers Ferry Formation

MH-44: Located 25 feet W of MH-28. Surface elevation 15 feet.

ASHLEY FM	0-20	Calcarenite, fine-grained, olive-brown
	20-21	Phosphate pebble bed
PARKERS FERRY FM	21-27	Calcilutite, blue-green, very stiff and dense

Base of Ashley Formation: -6 feet below sea level
Bottomed in Parkers Ferry Formation

MH-45: 0.35 miles W of east quad. border, 2.95 miles S of north quad. border. Surface elevation about 15 feet.

TEN MILE HILL BEDS	0-10	Clay, medium-gray, sticky, contains medium-brown lumps, grading to medium-blue at 9 feet with medium-green lumps
	10-15	Sand, medium-grained, black, grading down to black silt with wood fragments
GOOSE CREEK LS	15-31	Calcarenite, medium-grained, light brown, contains numerous *Pecten eboreus* fragments, phosphate pebble bed at base
PARKERS FERRY FM	31-35	Calcilutite, medium-green, contains echinoid spines

Base of Ten Mile Hill beds: ±0 feet at sea level
Base of Goose Creek Limestone: -15 feet below sea level
Bottomed in Parkers Ferry Formation

MH-46: 0.5 miles E of west quad. border, 0.9 miles N of south quad. border. Surface elevation 50 feet.

LADSON FM	0-5	Sand, coarse-grained, medium-reddish-orange grading down to medium-gray, angular, clayey
	5-7	Clay, medium-gray and medium-red mottled
	7-19	Sand, fine-grained, light-gray grading through medium-yellow to medium-gray, silty, micaceous, phosphate pebble bed at base
CHANDLER BRIDGE FM	19-36	Sand, fine-grained, dark-greenish-gray, well sorted; sand-size phosphate abundant; discoidal polished quartz pebbles, sharks' teeth, and barnacle fragments present
ASHLEY FM	36-60	Calcarenite, fine-grained, olive-brown, denser than above, contains large forams

Base of Ladson Formation: +31 feet above sea level
Base of Chandler Bridge Formation: +14 feet above sea level
Bottomed in Ashley Formation

MH-47: 2.5 miles E of west quad. border, 1.95 miles N of south quad. border. Surface elevation 16 feet.

WANDO FM (UPPER MEM)	0-2	Clay, dark-gray, soft, greasy, rich in organic matter
ASHLEY FM	2-121	Calcarenite, fine-grained, white in upper foot grading to olive-brown, clayey below 110, phosphate pebble bed at base
HARLEYVILLE FM	121-198	Calcarenite, very fine grained, medium-brownish-gray, silty, contains thin lime-cemented lenses toward base, basal 11 feet full of phosphate pebbles
CROSS FM	198-208	Calcarenite, fine-grained, light-yellow, well cemented

Base of Wando Formation (upper member): +14 feet above sea level
Base of Ashley Formation: -105 feet below sea level
Base of Harleyville Formation: -182 feet below sea level
Bottomed in Cross Formation

MH-48: 3.5 miles E of west quad. border, on south quad. border. Surface elevation 20 feet.

LADSON FM	0-5	Sand, fine-grained, medium-orangish-brown, silty
	5-10	Sand, fine-grained, light-gray, clayey, scattered quartz pebbles present
ASHLEY FM	10-58	Calcarenite, fine-grained, light-brown grading down to olive-brown by 20 feet, calcite lumps from 15 to 20 feet, sparse oyster shells near base

Base of Ladson Formation: +10 feet above sea level
Bottomed in Ashley Formation

MH-49: 1.8 miles W of east quad. border, 0.2 miles N of south quad. border.
Surface elevation 20 feet.

LADSON FM	0-5	Sand, coarse-grained, medium-gray and white mottled, pebbly
ASHLEY FM	5-60	Calcarenite, fine-grained, olive-brown, upper 20 feet contains calcite-cemented lumps, phosphate pebble bed at base; one pebble was a phosphatized bryozoan colony
PARKERS FERRY FM?	60-75	Calcarenite, fine-grained, medium-bluish-brown, less dense than above; phosphate pebble bed at 69 feet

Base of Ladson Formation: +15 feet above sea level
Base of Ashley Formation: -40 feet below sea level
Bottomed in Parkers Ferry(?) Formation

MH-50: 1.15 miles W of east quad. border, 1.5 miles N of south quad. border.
Surface elevation 40 feet.

LADSON FM	0-10	Sand, coarse-grained, medium-red and medium-brown mottled, clayey
	10-15	Clay, medium-gray, contains pockets of coarse-grained sand
	15-23	Sand, coarse-grained grading down to fine-grained and clayey; 5 cm diameter quartz discoids scattered near base; dark-brown peaty clay lens at base
ASHLEY FM	23-67	Calcarenite, fine-grained, olive-brown, very phosphatic near base, impenetrable pebble bed at base

Base of Ladson Formation: +17 feet above sea level
Base of Ashley Formation: -27 feet below sea level
Bottomed on Parkers Ferry Formation

MH-51: 2.5 miles W of east quad. border, 1.2 miles N of south quad. border. Surface elevation 33 feet.

LADSON FM	0-6	Sand, coarse-grained, medium-orange and medium-red mottled grading down to medium-gray, very clayey, finer toward base
	6-11	Clay, medium-gray, contains scattered coarse quartz sand grains and angular white granules (K-feldspar?)
ASHLEY FM	11-76	Calcarenite, fine-grained, light-brown (11-18) grading down to olive-brown, phosphate pebble bed at base; small amount of medium-bluish-green calcilutite on tip of drill bit

Base of Ladson Formation: +22 feet above sea level
Base of Ashley Formation: -43 feet below sea level
Bottomed on Parkers Ferry Formation

MH-52: 2.3 miles W of east quad. border, 4.3 miles S of north quad. border. Surface elevation 40 feet.

LADSON FM	0-10	Sand, coarse-grained, medium-red and medium-orange mottled grading down to medium-orange, angular at top grading down to subangular, clayey, very fine grained heavy minerals present near base
	10-11	Clay, medium-gray
	11-15	Sand, coarse-grained, medium-orange, subangular, very fine grained heavy minerals present
PARKERS FERRY FM	15-40	Calcilutite, medium-bluish-gray, contains echinoid spines

Base of Ladson Formation: +25 feet above sea level
Bottomed in Parkers Ferry Formation

MH-53: 2.8 miles W of east quad. border, 3.0 miles S of north quad. border. Surface elevation 45 feet.

LADSON FM	0-9	Clay, medium-red and medium-orange mottled grading down to medium-gray, contains coarse, angular sand grains, grades to:
	9-12	Sand, coarse-grained, sugary
PARKERS FERRY FM	12-20	Calcilutite, medium-bluish-gray with medium-brown mottles, contains echinoid spines, upper foot weathered white

Base of Ladson Formation: +33 feet above sea level
Bottomed in Parkers Ferry Formation

MH-54: 2.7 miles W of east quad. border, 1.05 miles S of north quad. border.
Surface elevation 48 feet.

LADSON FM	0-6	Sand, coarse-grained, medium-red and medium-brown mottled, clayey, muscovitic, phosphate pebbles at base
PARKERS FERRY FM	6-20	Calcilutite, medium-blue with medium-brown mottles, echinoid spines abundant in upper 5 feet

Base of Ladson Formation: +42 feet above sea level
Bottomed in Parkers Ferry Formation

MH-55: 1.6 miles W of east quad. border, 2.35 miles S of north quad. border.
Surface elevation 33 feet.

TEN MILE HILL BEDS	0-10	Clay, medium-gray, loamy in upper two feet, below that has platy laminae
LADSON FM	10-32	Sand, very coarse-grained, light-gray, sparse very fine grained heavy minerals and quartz pebbles present
PARKERS FERRY FM	32-40	Calcilutite, medium-bluish-green, echinoid spines present

Base of Ten Mile Hill beds: +23 feet above sea level
Base of Ladson Formation: +1 foot above sea level
Bottomed in Parkers Ferry Formation

MH-56: 0.9 miles E of west quad. border, 2.25 miles N of south quad. border.
Surface elevation 45 feet.

PENHOLOWAY FM	0-18	Sand, medium-grained, medium-orange grading down to medium-blue near base, gets clayey downward, phosphate pebble bed and shells at base
ASHLEY FM	18-65	Calcarenite, fine-grained, olive-brown, phosphatic

Base of Penholoway Formation: +27 feet above sea level
Bottomed in Ashley Formation

MH-57: 3.0 miles E of west quad. border, 2.75 miles S of north quad. border.
Surface elevation 45 feet.

FILL	0-10	Road base
ASHLEY FM	10-31	Calcarenite, fine-grained, olive-brown, very phosphatic 18-31, phosphate pebble bed at base
PARKERS FERRY FM	31-40	Calcilutite, medium-bluish-green, echinoid spines present

Base of Ashley Formation: +14 feet above sea level
Bottomed in Parkers Ferry Formation

MH-58: 2.25 miles S of north quad. border, 1.9 miles E of west quad. border.
Surface elevation 53 feet.

ALLUVIUM	0-6	Sand, coarse-grained, medium-orange
PENHOLOWAY FM	6-27	Clay, medium-blue, sandy, muscovitic, shelly, phosphate pebble bed at base
ASHLEY FM	27-78	Calcarenite, fine-grained, olive-brown, calcite lumps scattered throughout, phosphate pebble bed at base
PARKERS FERRY FM	78-85	Calcilutite, medium-bluish-green

Base of Alluvium: +47 feet above sea level
Base of Penholoway Formation: +26 feet above sea level
Base of Ashley Formation: -25 feet below sea level
Bottomed in Parkers Ferry Formation

MH-59: 2.75 miles E of west quad. border, 3.9 miles N of south quad. border.
Surface elevation 50 feet.

LADSON FM	0-10	Sand, coarse-grained, medium-gray, angular, fines downward to:
	10-13	Sand, fine-grained, medium-yellow, silty, scattered very fine grained heavy minerals present
ASHLEY FM	13-72	Calcarenite, fine-grained, olive-brown, phosphate pebble bed at base
PARKERS FERRY FM	72-75	Calcilutite, medium-blue

Base of Ladson Formation: +37 feet above sea level
Base of Ashley Formation: -22 feet below sea level
Bottomed in Parkers Ferry Formation

MH-60: 2.85 miles E of west quad. border, 3.65 miles S of north quad. border. Surface elevation 53 feet.

LADSON FM	0-8	Sand, fine-grained, medium-yellow, silty, scattered very fine grained heavy minerals present
	8-17	Sand, fine-grained, medium-orange and medium-gray mottled, clayey, phosphate pebble bed at base
ASHLEY FM	17-66	Calcarenite, fine-grained, olive-brown, contains calcite lumps, phosphate pebble bed at base
PARKERS FERRY FM	66-70	Calcilutite, medium-blue, echinoid spines present

Base of Ladson Formation: +36 feet above sea level
Base of Ashley Formation: -13 feet below sea level
Bottomed in Parkers Ferry Formation

MH-61: 3.55 miles E of west quad. border, 0.5 miles S of north quad. border. Surface elevation 63 feet.

PENHOLOWAY FM	0-3	Sand, coarse-grained, medium-orange, silty
	3-5	Sand, medium-grained, medium-orange, clayey
	5-13	Sand, fine-grained, medium-orangish-red grading down to medium-yellow, silty
	13-56	Sand, fine-grained, medium-blue to medium-bluish-green, silty to clayey, scattered shells present, sand becomes cleaner in basal 5 feet but no phosphate pebble bed present
PARKERS FERRY FM	56-60	Calcilutite, medium-greenish-gray, echinoid spines present, burrows at top contain sand

Base of Penholoway Formation: +7 feet above sea level
Bottomed in Parkers Ferry Formation

MH-62: 0.8 miles W of east quad. border, 2.95 miles S of north quad. border. Surface elevation 21 feet.

TEN MILE HILL BEDS	0-10	Clay, medium-gray mottled medium-orange near top
	10-14	Sand, fine-grained, light-gray, clayey
	14-20	Sand, medium-grained grading down to coarse-grained, medium-gray
	20-22	Sand, coarse-grained, medium-blue, shelly
PARKERS FERRY FM	22-35	Calcilutite, medium-greenish-gray, echinoid spines present

Base of Ten Mile Hill beds: -1 foot below sea level
Bottomed in Parkers Ferry Formation

MH-63: 0.25 miles W of east quad. border, 0.4 miles S of north quad. border. Surface elevation 11 feet.

FILL	0-1	Road base, light-yellow sand
WANDO FM (UPPER MEM)	1-3	Clay, medium-gray and medium-orange mottled, sandy
	3-6	Sand, medium-grained, medium-gray and medium-orange mottled
PARKERS FERRY FM	6-15	Calcilutite, medium-bluish-green, echinoid spines present

Base of Wando Formation (upper member): +5 feet above sea level
Bottomed in Parkers Ferry Formation

MH-64: 1.15 miles W of east quad. border, 0.075 miles S of north quad. border. Surface elevation 34 feet.

FILL	0-5	Sand, medium-grained, medium-gray and medium-orange mottled, clayey, pebbles in basal foot, probably a filled pit next to old house
TEN MILE HILL BEDS	5-8	Sand, medium-grained, medium-gray and medium-orange mottled, thin clay bed present at 6 feet
PARKERS FERRY FM	8-20	Calcilutite, medium-bluish-green and medium-green mottled grading down to medium-greenish-gray, echinoid spines present

Base of Ten Mile Hill beds: +26 feet above sea level
Bottomed in Parkers Ferry Formation

MH-65: 1.1 miles W of east quad. border, 1.0 miles S of north quad. border. Surface elevation 24 feet.

TEN MILE HILL BEDS	0-4	Clay, medium-gray, tough
	4-12	Sand, medium-grained grading down to coarse-grained, medium-gray, slightly clayey
GOOSE CREEK LS	12-15	Calcarenite, medium-grained, medium-yellow, phosphatic, *Argopecten eboreus* fragments abundant
	15-51	Calcarenite, medium-grained, medium-blue, *Argopecten eboreus* abundant, lumps of calcilutite present near base, phosphate pebble bed at base
PARKERS FERRY FM	51-55	Calcilutite, medium-green, very stiff, echinoid spines present, upper two feet burrowed and filled with Goose Creek Limestone lithology

Base of Ten Mile Hill beds: +12 feet above sea level
Base of Goose Creek Limestone: -27 feet below sea level
Bottomed in Parkers Ferry Formation

MH-66: 1.25 miles E of west quad. border, 1.6 miles N of south quad. border. Surface elevation about 40 feet.

LADSON FM	0-5	Sand, fine-grained, medium-orange and medium-gray streaked, clayey, dense
	5-9	Sand, medium- grading down to coarse-grained, medium-orange and medium-gray, angular, silty, pebbly
CHANDLER BRIDGE FM	9-25	Sand, fine-grained, medium-gray grading down to dark-greenish-gray, phosphatic, barnacle fragments present
ASHLEY FM	25-30	Calcarenite, fine-grained, olive-brown, phosphatic

Base of Ladson Formation: +31 feet above sea level
Base of Chandler Bridge Formation: +15 feet above sea level
Bottomed in Ashley Formation

MH-67: 2.2 miles E of west quad. border, 2.35 miles N of south quad. border. Surface elevation 45 feet.

LADSON FM	0-5	Sand, fine-grained, medium-reddish-orange, medium-red, and medium-gray mottled, clayey, dense
	5-7	Clay, medium-red, white phosphate pebbles at base
ASHLEY FM	7-35	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation: +38 feet above sea level
Bottomed in Ashley Formation

MH-68: 2.25 miles E of west quad. border, 1.35 miles N of south quad. border.
Surface elevation 48 feet.

LADSON FM	0-5	Sand, medium-grained, medium-reddish-orange, medium-red, and medium-gray mottled, poorly sorted, angular, clayey, stiff
	5-18	As above but medium-red and medium-pink mottled, pebble bed at base
CHANDLER BRIDGE FM	18-21	Sand, fine-grained, dark-greenish-gray, very phosphatic and slightly calcareous
ASHLEY FM	21-35	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation:	+30 feet above sea level
Base of Chandler Bridge Formation:	+27 feet above sea level

Bottomed in Ashley Formation

MH-69: 2.2 miles E of west quad. border, 0.15 miles N of south quad. border.
Surface elevation 15 feet.

FILL	0-2	Road base, sand
WANDO FM (UPPER MEM)	2-4	Sand, medium-grained, medium-gray and medium-orange mottled, clayey, iron hydroxide-cemented lumps present, phosphate pebble bed at base
CHANDLER BRIDGE FM	4-6	Sand, fine-grained, medium-gray and medium-orange mottled, white phosphate lumps scattered throughout, no basal phosphate bed
ASHLEY FM	6-15	Calcarenite, fine-grained, olive-brown, phosphatic

Base of Wando Formation (upper member):	+11 feet above sea level
Base of Chandler Bridge Formation:	+9 feet above sea level

Bottomed in Ashley Formation

MH-70: 2.2 miles W of east quad. border, 2.45 miles S of north quad. border.
Surface elevation 20 feet.

TEN MILE HILL BEDS	0-5	Clay, light-orangish-brown grading down to medium-gray, sandy at top and plinthitic, black wood fragments present near base
	5-8	Clay, medium-gray and medium-orange mottled, contains hard medium-green lumps
	8-11	Sand, coarse-grained, medium-gray and medium-brown mottled, clayey, contains angular granules, poorly sorted
PARKERS FERRY FM	11-25	Calcilutite, medium-bluish-green grading down to medium-bluish-green and medium-greenish-gray mottled, dense, echinoid spines present

Base of Ten Mile Hill beds: +9 feet above sea level
Bottomed in Parkers Ferry Formation

MH-71: 3.1 miles E of west quad. border, 1.3 miles S of north quad. border.
Surface elevation 79 feet.

PENHOLOWAY FM	0-5	Sand, medium- to coarse-grained, medium-orange grading down to medium-gray, poorly sorted, moderately well rounded, clayey, stiff
	5-8	Sand, coarse-grained, medium-orangish-brown, poorly sorted, angular, pebbly
	8-12	Clay, light-gray, dense, plastic
	12-22	Sand, fine-grained, light-brown to light-orange, silty, soft, contains abundant very fine grained heavy minerals
	22-24	Clay, medium-bluish-gray, micaceous
	24-34	Sand, fine-grained, medium-bluish-gray, silty, contains clay lenses, shelly below 30 feet
ASHLEY FM	34-35	Calcarenite, fine-grained, light-brown

Base of Penholoway Formation: +45 feet above sea level
Bottomed in Ashley Formation

MH-72: 1.05 miles E of west quad. border, 1.2 miles S of north quad. border. Surface elevation 89 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, medium-orange and medium-gray banded, well sorted, clayey
	5-10	Sand, fine-grained, medium-gray, well sorted very fine grained heavy minerals abundant
	10-45	Sand fine- to medium-grained, medium-gray, poorly sorted, medium-gray clay lense at top; shelly below 30 feet; denser and finer grained with medium-green clay lumps below 36 feet
	45-46	Sand, coarse-grained, medium-gray, phosphate pebbles abundant
ASHLEY FM	46-50	Calcarenite, fine-grained, light-brown, very phosphatic

Base of Penholoway Formation: +43 feet above sea level
Bottomed in Ashley Formation

MH-73: 0.3 miles E of west quad. border, 0.25 miles S of north quad. border. Surface elevation 85 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, dark-brown, humate-rich, well sorted, grades to:
	5-10	Sand, medium-grained, light-gray, poorly sorted, contains scattered granules, grades to:
	10-11	Sand, coarse-grained, contains granules and kaolinite ghosts of K-spar grains
	11-23	Clay, dark-gray, silty, soft
	23-33	Clay, dark-gray, sandy, shelly, grades to
	33-41	Sand, fine-grained, dark-gray, shelly
ASHLEY FM	41-45	Calcarenite, fine-grained, light-brown grading down to olive-brown, contains calcite-cemented lumps

Base of Penholoway Formation: +44 feet above sea level
Bottomed in Ashley Formation

MH-74: 1.6 miles E of west quad. border, 0.15 miles N of south quad. border.
Surface elevation about 35 feet.

LADSON FM	0-8	Clay, medium-red and medium-gray mottled, sandy, grading down to medium-gray clay, quartz discoidal pebble bed at base
PENHOLOWAY FM	8-14	Sand, fine-grained, light-brown, poorly sorted, pebble bed of quartz and phosphate at base
CHANDLER BRIDGE FM	14-19	Sand, fine-grained, dark-greenish-gray, very phosphatic
ASHLEY FM	19-30	Calcarenite, fine-grained (finer than above), olive-brown, large forams abundant

Base of Ladson Formation: +27 feet above sea level
Base of Penholoway Formation: +21 feet above sea level
Base of Chandler Bridge Formation: +16 feet above sea level
Bottomed in Ashley Formation

MH-75: 0.45 miles E of west quad. border, 3.25 miles N of south quad. border.
Surface elevation 79 feet.

PENHOLOWAY FM	0-5	Sand, fine-grained, medium-red grading down to medium-yellowish-orange and light-gray mottled, clayey, micaceous
	5-14	Sand, fine-grained and medium-grained interbedded, scattered very fine grained heavy minerals present, light-brown except for a medium-reddish-orange interval from 8-9 feet, sparse white clay blobs (9-10) and numerous (about 2 cm diam.) white clay balls (10-14) present
	14-23	Clay, medium-red at top grading down to medium-bluish-gray by base, very micaceous
	23-30	Sand, fine-grained, medium-bluish-gray, clayey
	30-45	Sand, fine-grained, medium-bluish-gray, clayey. shelly (mostly *Mulinia* but also sparse oysters and other bivalves); medium-blue clay lense at 40 feet
	45-50	Sand, coarse-grained, medium-bluish-gray, not as shelly as above, phosphate pebble bed at base
ASHLEY FM	50-60	Calcarenite, fine-grained, olive-brown, phosphatic

Base of Penholoway Formation: +29 feet above sea level
Bottomed in Ashley Formation

MH-76: 0.1 miles W of east quad. border, 4.1 miles N of south quad. border.
Surface elevation 30 feet.

TEN MILE HILL BEDS	0-5	Sand, fine-grained, medium-red and medium-gray mottled, clayey, dense, grades to:
	5-10	Clay, medium-gray, sandy, dense
	10-13	Sand, fine-grained, light-orange, clayey
	13-15	Clay, medium-gray, sandy, stiff
	15-21	Sand, medium-grained, light-brown, poorly sorted
	21-25	Sand, medium-grained, medium-blue, and clayey peat, dark-brown, interbedded
	25-28	Sand, fine- grading down to medium-grained, dark-brown, humic, poorly sorted
GOOSE CREEK LS	28-37	Calcarenite, medium-grained, light-brown, phosphatic, soft, calcite-cemented lumps and *Argopecten eboreus* fragments present, sparse phosphate pebbles at base
PARKERS FERRY FM	37-50	Calcilutite, medium-bluish-green, echinoid spines present

Base of Ten Mile Hill beds: +2 feet above sea level
Base of Goose Creek Limestone: -7 feet below sea level
Bottomed in Parkers Ferry Formation

MH-77: 0.9 miles W of east quad. border, 4.1 miles N of south quad. border.
Surface elevation 28 feet.

TEN MILE HILL BEDS	0-9	Clay, medium-red and medium-gray mottled, sandy, stiff
GOOSE CREEK LS	9-28	Calcarenite, medium-grained, light-brown, phosphatic, soft, calcite-cemented lumps and *Argopecten eboreus* present, grades to:
	28-43	Calcarenite, medium-grained, light-bluish-gray, phosphate pebble bed at base
PARKERS FERRY FM	43-45	Calcilutite, medium-greenish-gray, stiff, burrowed and burrows filled with overlying lithology

Base of Ten Mile Hill beds: +19 feet above sea level
Base of Goose Creek Limestone: -15 feet below sea level
Bottomed in Parkers Ferry Formation

MH-78: 0.55 miles W of east quad. border, 3.3 miles N of south quad. border. Surface elevation 24 feet.

TEN MILE HILL BEDS	0-5	Clay, medium-red and medium-gray mottled, stiff, sandy, grading down to sand, fine-grained, medium-red and medium-gray mottled, stiff, clayey
	5-10	Clay, medium-bluish-green, stiff, contains hard medium-green lumps
	10-15	Clay, medium-blue, sticky, smooth texture
	15-24	Clay, medium-blue, contains numerous oysters and possibly some *Mulinia* at base
	24-26	Sand, coarse-grained, medium-blue
PARKERS FERRY FM	26-35	Calcilutite, medium-bluish-green, dense, echinoid spines present

Base of Ten Mile Hill beds: -2 feet below sea level
Bottomed in Parkers Ferry Formation

MH-79: 3.4 miles W of east quad. border, 2.05 miles N of south quad. border. Surface elevation about 42 feet.

LADSON FM	0-10	Sand, fine-grained, clayey, to clay, sandy, medium-red and medium-orange mottled
	10-14	Clay, silty, scattered coarse sand grains and muscovite flakes present
ASHLEY FM	14-20	Calcarenite, fine-grained, dark-yellowish-brown

Base of Ladson Formation: +28 feet above sea level
Bottomed in Ashley Formation

MH-80: 1.85 miles E of west quad. border, 4.25 miles S of north quad. border. Surface elevation 67 feet.

FILL	0-3	Road base
PENHOLOWAY FM	3-7	Sand, coarse- to medium-grained, bright medium-red and medium-yellow mottled, clayey, rare medium-gray clay laminae present
	7-9	Clay, medium-reddish-yellow and medium-gray mottled, sandy
	9-18	Sand, medium-grained, medium-gray, becomes more clay-rich downward
	18-34	Sand, medium-grained, medium-bluish-gray, sparsely shelly, phosphate pebbles abundant in basal 3 feet
ASHLEY FM	34-35	Calcarenite, fine-grained, olive-brown

Base of Penholoway Formation: +33 feet above sea level
Bottomed in Ashley Formation

MH-81: 1.2 miles E of west quad. border, 3.3 miles S of north quad. border. Surface elevation 84 feet.

PENHOLOWAY FM	0-13	Sand, medium- to coarse-grained, some quartz granules present, medium-gray, scattered very fine grained heavy minerals present
	13-15	Sand, fine-grained, light-olive-gray, clean
	15-16	Clay, medium-greenish-black, sandy
	16-18	Sand, medium-grained, dark-greenish-gray, muscovitic
	18-20	Clay, dark-greenish-gray
	20-24	Sand, fine-grained, silty and clayey, dark-greenish-gray
	24-29	Sand, medium-grained, dark-olive-gray, slightly clayey
	29-29.5	Clay, sandy, dark-greenish-gray
	29.5-35	Silt, slightly sandy to clayey, dark-greenish-black, increasingly shelly downward
	35-39	Sand, coarse-grained, muddy, dark-greenish-black, shelly
MARKS HEAD FM	39-45	Clay, dark-greenish-gray, waxy, somewhat gritty and sparsely shelly at base
ASHLEY FM	at 45	Calcarenite, fine-grained, white, abundant sand-size and pebble-size phosphate (up to 2 cm)

Base of Penholoway Formation: +45 feet above sea level
Base of Marks Head Formation: +39 feet above sea level
Bottomed in Ashley Formation

MH-82: 0.5 miles E of west quad. border, 1.65 miles S of north quad. border. Surface elevation 90 feet.

PENHOLOWAY FM	0-18	Sand, fine-grained, medium-reddish-orange, scattered very fine grained heavy minerals present
	18-22	Sand, fine-grained, medium-greenish-gray, rare clay lenses present,
	22-28	Silt, sandy, medium-greenish-gray
	28-38	Sand, fine- to medium-grained, medium-greenish-gray, very fine grained heavy minerals and muscovite abundant, clay lenses present
	38-45	Sand, medium-grained, medium-greenish-gray, shelly
MARKS HEAD FM	45-49	Clay, dense, medium-green, silty
ASHLEY FM	49-50	Calcarenite, fine-grained, light-brown, contains calcite-cemented lumps

Base of Penholoway Formation: +45 feet above sea level
Base of Marks Head Formation: +41 feet above sea level
Bottomed in Ashley Formation

MH-83: 3.6 miles E of west quad. border, on north quad. border. Surface elevation 65 feet.

PENHOLOWAY FM	0-19	Sand, medium-grained, medium-gray with medium-yellow mottles, clayey
	19-26	Sand, medium-grained, dark-bluish-gray, clayey, shelly
PARKERS FERRY FM	26-30	Calcilutite, medium-bluish-gray and medium-brownish-gray mottled

Base of Penholoway Formation: +39 feet above sea level
Bottomed in Parkers Ferry Formation

MH-84: 3.3 miles E of west quad. border, 2.7 miles N of south quad. border.
Surface elevation 23 feet.

WANDO FM (UPPER MEM)	0-5	Clay, sandy, medium-gray, stiff
ASHLEY FM	5-71	Calcarenite, fine-grained, olive-brown to olive-green, contains sand-size phosphate (especially in basal 6 feet), phosphate pebble bed at base
PARKERS FERRY FM	71-80	Calcilutite, medium-greenish-gray, crumbly

Base of Wando Formation (upper member): +18 feet above sea level
Base of Ashley Formation: -48 feet below sea level
Bottomed in Parkers Ferry Formation

MH-85: 2.75 miles E of west quad. border, 3.4 miles N of south quad. border.
Surface elevation about 45 feet.

LADSON FM	0-8	Sand, fine-grained, clayey, grading to clay, sandy, medium-red (0-1) grading down to medium-yellow and medium-gray mottled, dense
	8-22	Sand, fine-grained, clayey except near base, medium-yellowish-orange grading through medium-yellowish-gray and medium-olive-gray to medium-greenish-black, muscovitic, blue quartz pebbles and phosphate pebbles at base
ASHLEY FM	22-25	Calcarenite, fine-grained, olive-green

Base of Ladson Formation: +23 feet above sea level
Bottomed in Ashley Formation

MH-86: 0.55 miles E of west quad. border, 1.95 miles N of S quad. border.
Surface elevation 49 feet.

PENHOLOWAY FM	0-3.5	Soil
	3.5-7.5	Sand, fine-grained, light-yellowish-brown, clean, wood fragment at base
	7.5-12	Sand, fine- to medium-grained, soupy, brownish-black, wood at base
	12-22	Sand, medium-grained, soupy, shelly, dark-greenish-olive grading down to medium-greenish-gray by base
ASHLEY FM	22-25	Calcarenite, fine-grained, olive-green

Base of Penholoway Formation: +27 feet above sea level
Bottomed in Ashley Formation

MH-87: 1.95 miles W of east quad. border, 3.2 miles S of north quad. border. Surface elevation 15 feet.

WANDO FM (UPPER MEM)	0-15	Clay, dark-gray, getting sandy downward and grading to a basal coarse-grained sand, basal gravel contains quartz discoids and phosphate lumps. Possibly lower part of section is pre-Wando, but no boundary was observed
PARKERS FERRY FM	15-89	Calcilutite, medium-greenish-gray, echinoid spines present, thin phosphate pebble bed at base
HARLEYVILLE FM	89-140	Calcarenite, very fine grained, medium-brownish-gray, contains thin lime-cemented lenses, phosphate pebble bed at base
CROSS LS	140-145	Calcarenite, fine-grained, very light gray, well cemented, faulted near the top and a thin section of Harleyville is repeated

Base of Wando Formation:	±0 feet at sea level
Base of Parkers Ferry Formation:	-74 feet below sea level
Base of Harleyville Formation:	-125 feet below sea level

Bottomed in Cross Limestone

STALLSVILLE QUADRANGLE

(Depths in feet)

ST-1: 3.2 miles E of west quad. border, 0.5 miles S of north quad. border. Surface elevation 70 feet.

PENHOLOWAY FM	0-20	Clay, medium-gray and medium-red, kaolinitic, interbedded with fine silty sands

Base of exposure in Penholoway Formation

ST-2: 2.8 miles E of west quad. border, 2.85 miles S of north quad. border. Bluff at Bacon Bridge, at intersection of SC165 and Ashley River. Elevation at top of exposure about 25 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained, light-orange, slightly indurated
	5-10	Sand, medium-grained, light-gray, weathered but phosphatic
ASHLEY FM	10-20	Calcarenite, fine-grained, olive brown, phosphatic

Base of Ten Mile Hill beds: +5 feet above sea level
Bottom of section in Ashley Formation

ST-3: 3.2 miles E of west quad. border, 1.5 miles S of north quad. border. Surface elevation 27 feet.

FILL	0-1	Ditch bank spoil
TEN MILE HILL BEDS	1-3	Sand, medium-grained, dark-gray, clayey, one inch layer of phosphate pebbles at base
CHANDLER BRIDGE FM	3-7	Sand, fine-grained, medium-gray, burrows abundant, white bones and teeth present
ASHLEY FM	7-8	Calcarenite, fine-grained, olive-brown, phosphatic

Base of Ten Mile Hill beds: +24 feet above sea level
Base of Chandler Bridge Formation ±20 feet above sea level
Bottomed in Ashley Formation

ST-4: 3.3 miles E of west quad. border, 1.2 miles S of north quad. border.
Surface elevation 50 feet.

PENHOLOWAY FM	0-5	Clay, light-gray and medium-red interlaminated, kaolinitic, interbedded with fine-grained silty sand

Base of exposure in Penholoway Formation

ST-5: 2.35 miles W of east quad. border, 3.0 miles S of north quad. border.
Surface elevation about 15 feet.

Ditch with Chandler Bridge Fm. at base overlain by pebbly channel sands of Wando age. Section not measured precisely, total thickness approx. 4 feet for Wando Formation, 1 foot for Chandler Bridge.

ST-6: 2.6 miles W of east quad. border, 3.65 miles S of north quad. border.
Bluff at Old Fort Dorchester. Surface elevation 15 feet.

WANDO FM (UPPER MEM)	0-6	Sand, medium-grained, light-gray, weathered, lumps of phosphate scattered throughout
	6-8	Sand, medium-grained, medium-blue, clayey, phosphate pebble and cobble bed at base, in troughs on top of Ashley
ASHLEY FM	6-15	Calcarenite, fine-grained, olive-brown, phosphatic shelly

Base of Wando Formation (upper member): +7 to +9 feet above sea level
Bottomed in Ashley Formation

ST-7: 3.9 miles E of west quad. border, 2.8 miles S of north quad. border.
Surface elevation 29 feet.

TEN MILE HILL BEDS	0-6	Sand, fine-grained, medium-greenish-gray, silty and clayey, breaks into blocks when dry; phosphate and quartz pebble bed at base about 3 cm thick; quartz pebbles discoidal; rolled and worn bone fragments present
CHANDLER BRIDGE FM	6-8	Sand, fine-grained, medium-greenish-gray, very phosphatic, soft, occasional bones and teeth including skull fragment of *Xenorophus sp.*, no basal phosphate bed
ASHLEY FM	8-10	Calcarenite, fine-grained, light-brown grading down to olive-brown, numerous burrows present filled with very phosphatic calcarenite

Base of Ten Mile Hill beds: +23 feet above sea level
Base of Chandler Bridge Formation: +21 feet above sea level
Bottomed in Ashley Formation

ST-8: 1.2 miles W of east quad. border, 2.6 miles S of north quad. border.
Surface elevation about 15 feet.

WANDO FM (UPPER MEM)	0-6	Sand, fine- to medium-grained, light-gray, clayey, weathers into blocky lumps; 3 cm thick phosphate and quartz pebble bed at base
CHANDLER BRIDGE FM	6-8	Sand, fine-grained, medium-gray, silty, soft, occasional bones and a sea turtle skeleton (*cf. Syllomus*) present
ASHLEY FM	8-10	Calcarenite, fine-grained, light-brown grading down to olive-brown, numerous burrows present filled with very phosphatic calcarenite

Base of Wando Formation (upper member): +19 feet above sea level
Base of Chandler Bridge Formation: +7 feet above sea level
Bottomed in Ashley Formation

ST-9: 0.45 miles W of east quad. border, 1.7 miles N of south quad. border. Surface elevation 10 feet.

TEN MILE HILL BEDS	0-4	Concealed, phosphate pebble bed partially exposed at base
ASHLEY FM	4-10	Calcarenite, fine-grained, light-brown where weathered, olive-brown where fresh

Base of Ten Mile Hill beds: +6 feet above sea level
Bottomed in Ashley Formation

ST-10: 1.9 miles W of east quad. border, 4.0 miles S of north quad. border, at bluff on NE side of Ashley River. Surface elevation 20 feet.

TEN MILE HILL BEDS	0-8	Concealed
ASHLEY FM	8-14	Sand, fine-grained, phosphatic, light-brown, residuum of material below, grades down to:
	14-20	Calcarenite, fine-grained, light-brown where weathered and olive-brown where fresh

Base of Ten Mile Hill beds: +12 feet above sea level
Base of section in Ashley Formation

ST-11: 3.55 miles W of east quad. border, 3.35 miles S of north quad. border. Surface elevation -2 feet below sea level.

ASHLEY FM	0-2	Calcarenite, fine-grained, olive-brown

Ashley Formation present on river bottom about 2 to 4 feet below sea level.

ST-12: 3.65 miles W of east quad. border, 3.1 miles S of north quad. border, at bluff on E bank of Ashley River. Top of exposure at 10 feet elevation.

ASHLEY FM	0-10	Calcarenite, fine-grained, light-brown at surface and olive-brown where freshly excavated

Base of exposure in Ashley Formation

ST-13: 2.4 miles W of east quad. border, 3.45 miles S of north quad. border in tidal bluff at ford across Dorchester Creek. Surface elevation 6 feet.

SILVER BLUFF	0-2	Sand, medium-grained, medium-gray, poorly consolidated, humic
ASHLEY FM	2-6	Calcarenite, fine-grained, olive-brown, dense

Base of Silver Bluff (Holocene): +4 feet above sea level
Base of section in Ashley Formation

ST-14: 2.3 miles E of west quad. border, 3.5 miles S of north quad. border. Surface elevation 17 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained, light-gray, well-sorted, badly weathered, phosphate pebble bed at base
CHANDLER BRIDGE FM	5-7	Sand, fine-grained, medium-gray, well-sorted, bioturbated, very phosphatic, contains sea cow (dugong) and sea turtle bones, sharks teeth
	7-8	Sand, fine-grained, clayey, dark-yellowish-brown, soft, very phosphatic
ASHLEY FM	8-9	Calcarenite, fine-grained, olive-brown, phosphatic, dense

Base of Ten Mile Hill beds: +12 feet above sea level
Base of Chandler Bridge Formation: +9 feet above sea level
Bottom of ditch in Ashley Formation

ST-15: 2.1 miles S of north quad. border, 3.4 miles E of west quad. border. Surface elevation 53 feet.

LADSON FM	0-12	Sand, medium-grained, light-yellow, poorly compacted
	12-16	Clay, light-gray, well laminated
	16-22	Sand, medium-grained to coarse-grained, yellowish-gray to light-olive-gray, clayey
	22-30	Sand, medium-grained, dark-greenish-gray (medium-gray where weathered), phosphatic, sparsely shelly, phosphate pebble bed at base
CHANDLER BRIDGE FM	30-32	Sand, fine-grained, dark-greenish-gray (medium-gray where weathered), bioturbated, contains whale bones and sharks teeth
ASHLEY FM	32-40	Calcarenite, fine-grained, olive-brown, phosphatic, dense

Base of Ladson Formation: +23 feet above sea level
Base of Chandler Bridge Formation: +21 feet above sea level
Bottom of pit in Ashley Formation

ST-16: 1.6 miles W of east quad. border, 2.2 miles S of north quad. border at Charleston Museum excavation site (Type section of the Chandler Bridge Formation). Surface elevation 18 feet.

TEN MILE HILL BEDS	0-1	Sand, medium-grained, medium-gray, clayey, dense
	1-4	Sand, medium-grained, medium-gray, angular, massive, clayey, well compacted, contains basal quartz and phosphate pebble bed 1 cm thick
CHANDLER BRIDGE FM	4-6	Sand, medium-grained, medium-gray, very phosphatic, massive, clayey, well compacted; abundant subrounded to subangular lumps of phosphate present (Bed 3)
	6-7	Sand, fine-grained, medium-gray, very phosphatic, bioturbated, clayey, moderately compacted; abundant subrounded to subangular lumps of phosphate present (Bed 2)
	7-8	Sand, fine-grained, dark-yellowish-brown, massive, clayey, slightly calcareous, moderately compacted; rests on a sharply defined, undulatory surface (Bed 1)
ASHLEY FM	8-9	Calcarenite, fine-grained, olive-brown, bioturbated, well-compacted but not lithified; contains fine-grained phosphate and quartz sand

Base of Ten Mile Hill beds: +14 feet above sea level
Base of Chandler Bridge Formation: +10 feet above sea level
Bottomed in Ashley Formation

ST-17: 1.05 miles W of east quad. border, 1.15 miles S of north quad. border. Surface elevation 62 feet.

LADSON FM	0-8.5	Sand, medium-grained, light-yellowish-brown with dark-yellowish-orange mottled near surface, grading down to light-yellowish-brown and medium-gray interbedded, slightly clayey
	8.5-11	Clay, medium-gray, and sand, fine-grained, medium-yellowish-gray, interlayered
	11-20	Clay, medium-gray, massive
PENHOLOWAY FM	20-30	Clay, silty, dark-greenish-gray with numerous shells; stringers of coarse-grained sand near base
	30-34	Clay, light-blue, numerous lumps of rolled and polished black phosphate present
CHANDLER BRIDGE FM	34-38	Sand, fine-grained, dark-greenish-gray with light-brown lumps of phosphate
ASHLEY FM	38-40	Calcarenite, fine-grained, dark-greenish-gray, abundant sand-sized phosphate and lumps of calcite present

Base of Ladson Formation: +42 feet above sea level
Base of Penholoway Formation: +28 feet above sea level
Base of Chandler Bridge Formation: +24 feet above sea level
Bottomed in Ashley Formation

ST-18: 0.8 miles W of east quad. border, 2.75 miles S of north quad. border. Surface elevation 51 feet (road cut for top 15 feet, rest from auger hole).

LADSON FM	0-9	Sand, medium-grained, medium-orange, clayey
	9-15	Sand, medium-grained, white, thin clayey interlaminae present which thicken to about 1 cm each by base
	15-23	Sand, mostly fine-grained but some medium-grained, dark-yellowish-orange, clayey
	23-24	Sand, medium-grained, olive-gray, contains grains and pebbles of phosphate and sparse oyster shells
ASHLEY FM	24-29	Calcarenite, fine-grained, olive-brown, contains sand-size phosphate

Base of Ladson Formation: +27 feet above sea level
Bottomed in Ashley Formation

ST-19: 1.45 miles W of east quad. border, 2.35 miles S of north quad. border. Surface elevation 20 feet.

TEN MILE HILL BEDS	0-2	Sand, medium-grained, dark-greenish-gray
ASHLEY FM	2-10	Calcarenite, fine-grained, light-brown grading down to olive-brown, sparsely shelly

Base of Ten Mile Hill beds: +18 feet above sea level
Bottomed in Ashley Formation

ST-20: 2.85 miles W of east quad. border, 3.3 miles S of north quad. border. Surface elevation 15 feet.

FILL	0-2	Sand, coarse-grained, road base
ASHLEY FM	2-15	Calcarenite, fine-grained, light-brown grading down to olive-brown, numerous calcite-cemented lumps present

Bottomed in Ashley Formation

ST-21: 2.6 miles E of west quad. border, 1.2 miles S of north quad. border, by ruins of Newington Plantation. Surface elevation 65 feet.

PENHOLOWAY FM	0-2	Sand, fine-grained, medium-orangish-red, loamy
	2-8	Sand, fine-grained, medium-orangish-red to medium-brownish-red, lenses of medium-red to medium-gray clay present
	8-28	Clay, dark-brownish-red grading down through light-grayish-red to light-grayish-red and light gray mottled to medium-orange at base
	28-34	Clay, sandy, medium-orange and medium-gray mottled
	34-38	Sand, medium-grained, medium-orange, quartz pebbles abundant
CHANDLER BRIDGE FM	38-45	Sand, medium-grained, medium-gray grading down to dark-greenish-gray, clayey, sand fraction very phosphatic, phosphate lumps and fish bones abundant
ASHLEY FM	45-50	Calcarenite, fine-grained, olive-green, phosphatic

Base of Penholoway Formation: +27 feet above sea level
Base of Chandler Bridge Formation: +20 feet above sea level
Bottomed in Ashley Formation

ST-22: 2.65 miles W of east quad. border, 1.95 miles S of north quad. border. Surface elevation 23 feet.

TEN MILE HILL BEDS	0-4	Sand, medium-grained, medium-bluish-gray, clayey
	4-7	Sand, medium-grained, medium-bluish-gray, stringers of dark-yellowish-brown clay at base (Chandler Bridge?)
ASHLEY FM	7-10	Calcarenite, fine-grained, olive-green, clayey

Base of Ten Mile Hill beds: +16 feet above sea level
Base of Chandler Bridge(?) Formation: +16 feet above sea level
Bottomed in Ashley Formation

ST-23: 2.65 miles W of east quad. border, 0.25 miles S of north quad. border. Surface elevation 69 feet.

PENHOLOWAY FM	0-3.5	Sand, medium-grained, medium-orange, clayey
	3.5-9.0	Clay, sandy, dark-brownish-red with medium-gray mottles, sticky
	9.0-14.5	Clay, silty, dark-brownish-red with medium-gray mottles, soupy texture
	14.5-29.5	Sand, medium-grained, clayey, dark-bluish-gray to dark-greenish-gray, shelly and micaceous below 22.5 feet
	29.5-37.0	Clay, plastic, bright medium-bluish-gray, large lumps of phosphate present below 34 feet
ASHLEY FM	37-40	Calcarenite, fine-grained, olive-green, massive

Base of Penholoway Formation: +32 feet above sea level
Bottomed in Ashley Formation

ST-24: 0.15 miles W of east quad. border, 0.95 miles S of north quad. border. Surface elevation 49 feet.

PENHOLOWAY FM	0-23	Sand, medium-grained, clayey, light-bluish-gray to light-greenish-gray, shelly, sparse phosphate pebbles at base
ASHLEY FM	23-40	Calcarenite, fine-grained, dark-olive-green, clayey, calcite-cemented lumps present

Base of Penholoway Formation: +26 feet above sea level
Bottomed in Ashley Formation

ST-25: 0.75 miles W of east quad. border, 1.85 miles S of north quad. border.
Surface elevation 28 feet.

FILL	0-2	Road base
TEN MILE HILL BEDS	2-11.5	Sand, coarse-grained, light-brownish-gray grading down to dark-gray, slightly clayey, poorly compacted
CHANDLER BRIDGE FM	11.5-12	Clay, dark-yellowish-brown
ASHLEY FM	12-15	Calcarenite, fine-grained, olive-green, clayey

Base of Ten Mile Hill beds: +17 feet above sea level
Base of Chandler Bridge Formation: +16 feet above sea level
Bottomed in Ashley Formation

ST-26: 1.65 miles W of east quad. border, 3.95 miles S of north quad. border.
Surface elevation 24 feet.

TEN MILE HILL BEDS	0-12	Clay, sandy, medium-orange with medium-gray mottles, quartz and phosphate pebbles (2 cm diameter) at base
ASHLEY FM	12-20	Calcarenite, fine-grained, olive-green, clayey

Base of Ten Mile Hill beds: +12 feet above sea level
Bottomed in Ashley Formation

ST-27: 0.95 miles W of east quad. border, 1.65 miles S of north quad. border.
Surface elevation 43 feet.

LADSON FM	0-1	Soil
	1-3	Clay, medium-gray, sticky
	3-16	Sand, medium-grained, medium-yellow, clayey, poorly compacted
	16-23.5	Sand, medium-grained, medium-gray grading down to dark-gray, clayey, poorly compacted, basal 2 feet contains phosphate pebbles and quartz discoids
PENHOLOWAY FM	23.5-28.5	Sand, fine-grained, dark-greenish-gray, clayey, basal 1.5 foot contains quartz discoids and phosphate pebbles
ASHLEY FM	28.5-35	Calcarenite, fine-grained, olive-green

Base of Ladson Formation: +18 feet above sea level
Base of Penholoway Formation: +15 feet above sea level
Bottomed in Ashley Formation

ST-28: 3.6 miles W of east quad. border, 0.75 miles S of north quad. border.
Surface elevation 70 feet.

PENHOLOWAY FM	0-4	Sand, fine-grained, medium-red
	4-6	Clay, medium-gray
	6-16	Clay, medium-red, not very plastic at top but more so downward
	16-20	Sand, fine-grained, medium-red, very clayey
	20-24	Clay, medium-red
	24-33	Sand, medium-grained, light-greenish-gray, clayey, very shelly, rare blebs of blue clayey sand toward base and phsophate pebble bed in basal foot
ASHLEY FM	33-40	Calcarenite, fine-grained, olive-green

Base of Penholoway Formation: +37 feet above sea level
Bottomed in Ashley Formation

ST-29: 2.35 miles W of east quad. border, 2.6 miles S of north quad. border.
Surface elevation about 22 feet.

FILL	0-1	Road base, soil horizon underneath
TEN MILE HILL BEDS	1-5	Clay, sandy, medium-orange and medium-red mottled, tough, breaks into small lumps
	5-6.5	Sand, clayey, light-gray, well-compacted
	6.5-7	Sand, light-gray, poorly compacted, smear of brown clay at base (Chandler Bridge?)
ASHLEY FM	7-12	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +15 feet above sea level
Base of Chandler Bridge(?) Formation: +15 feet above sea level
Bottomed in Ashley Formation

ST-30: 2.65 miles W of east quad. border, 1.05 miles S of north quad. border. Surface elevation 47 feet.

LADSON FM	0-5	Clay, medium-orange at top grading down through medium-gray to medium-red
	5-15.5	Sand, medium-grained, medium-reddish-orange grading down to medium-yellowish-orange, clayey, coarsens downward
PENHOLOWAY FM	15.5-17.5	Clay, medium-gray
	17.5-23.5	Silt, yellowish-orange, slightly sandy, medium-gray clay lumps scattered throughout, phosphate pebbles present in basal foot
CHANDLER BRIDGE FM	23.5-26	Sand, fine-grained, clayey, dark-yellowish-brown to dark-greenish-gray, sand-sized phosphate abundant
ASHLEY FM	26-30	Calcarenite, fine-grained, olive-green

Base of Ladson Formation: +31 feet above sea level
Base of Penholoway Formation: +24 feet above sea level
Base of Chandler Bridge Formation: +21 feet above sea level
Bottomed in Ashley Formation

ST-31: 1.75 miles W of east quad. border, 1.15 miles S of north quad. border. Surface elevation about 48 feet.

LADSON FM	0-3.5	Sand, fine-grained, medium-orangish-red, clayey
	3.5-10.5	Clay, massive, medium-red and medium-gray mottled
	10.5-19.5	Sand, medium-grained, clayey, light-orange grading down by 19 feet to medium-yellow
	19.5-23	Sand, fine-grained, medium-yellow, very silty, muscovitic
	23-23.5	Clay, medium-gray, plastic
	23.5-26	Sand, coarse-grained grading down to medium-grained, medium-orange grading down to medium-yellowish-orange, clayey and silty, quartz pebbles (about 0.5 cm diameter) at base
CHANDLER BRIDGE FM	26-31	Sand, fine-grained, dark-greenish-gray, contains lumps of phosphate in upper foot (burrow fill?). Stringer of medium-orange clay at basal contact
ASHLEY FM	31-35	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation: +22 feet above sea level
Base of Chandler Bridge Formation: +17 feet above sea level
Bottomed in Ashley Formation

ST-32: 1.7 miles E of west quad. border, 0.95 miles N of south quad. border.
Surface elevation about 8 feet.

FILL	0-2	Road base
SILVER BLUFF	2-6	Sand, fine-grained, medium-gray, very clayey, massive, sticky
WANDO FM (UPPER MEM)	6-8.5	Sand, fine- to medium-grained, light-gray, clayey
	8.5-16	Sand, medium- grading down to coarse-grained, light-greenish-gray, micaceous, phosphate pebble bed at base
ASHLEY FM	16-20	Calcarenite, fine-grained, olive-brown

Base of Silver Bluff (Holocene):	+2 feet above sea level
Base of Wando Formation (upper member):	-8 feet below sea level

Bottomed in Ashley Formation

ST-33: 2.2 miles E of west quad. border, 1.45 miles N of south quad. border.
Surface elevation about 11 feet.

WANDO FM (UPPER MEM)	0-3	Sand, fine-grained, dark-gray, clayey, humic, phosphate pebble and cobble bed at base; some cobbles contain molds of *Ostrea haitensis*
CHANDLER BRIDGE FM	3-4	Sand, fine-grained, light-gray mottled medium-orange, clayey
ASHLEY FM	4-6	Calcarenite, fine-grained, light-brown and partly cemented

Base of Wando Formation (upper member):	+8 feet above sea level
Base of Chandler Bridge Formation:	+7 feet above sea level

Bottomed in Ashley Formation

ST-34: 2.6 miles E of west quad. border, 1.9 miles N of south quad. border.
Surface elevation about 24 feet.

TEN MILE HILL BEDS	0-3.5	Sand, fine-grained, medium-orange
	3.5-17	Clay, medium-bluish-gray, massive, plastic, micaceous below 7 feet, two sand lenses below 7 feet, woody below 11 feet
ASHLEY FM	17-20	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +7 feet above sea level
Bottomed in Ashley Formation

ST-35: 2.95 miles E of west quad. border, 2.3 miles N of south quad. border.
Surface elevation about 11 feet.

WANDO FM (UPPER MEM)	0-4	Clay, medium-gray and medium-orange mottled, blocky, phosphate pebble bed at base
ASHLEY FM	4-6	Calcarenite, fine-grained, light-olive-brown

Base of Wando Formation (upper member): +7 feet above sea level
Bottomed in Ashley Formation

ST-36: 3.5 miles E of west quad. border, 2.9 miles N of south quad. border.
Surface elevation 30 feet.

TEN MILE HILL BEDS	0-12	Sand, medium- grading down to coarse-grained with phosphate pebbles at base, medium-orange grading down to light-brown, clayey and silty
ASHLEY FM	12-20	Calcarenite, fine-grained, light-brown, leached in upper 3 feet

Base of Ten Mile Hill beds: +18 feet above sea level
Bottomed in Ashley Formation

ST-37: 3.2 miles E of west quad. border, 2.6 miles N of south quad. border.
Surface elevation about 32 feet.

TEN MILE HILL BEDS	0-15	Sand, medium-grained, light-orange, stiff, clayey (0-13) grading down to silty, phosphate lumps at basal contact
ASHLEY FM	15-25	Calcarenite, fine-grained, light-brown, weathered and very phosphatic in upper 5 feet

Base of Ten Mile Hill beds: +17 feet above sea level
Bottomed in Ashley Formation

ST-38: 3.9 miles E of west quad. border,3.3 miles N of south quad. border.
Surface elevation about 16 feet.

WANDO FM (UPPER MEM)	0-5	Clay, medium-blue, stiff, massive, phosphate lumps (small to large) scattered throughout
ASHLEY FM	5-10	Calcarenite, fine-grained, light-brown

Base of Wando Formation (upper member): +11 feet above sea level
Bottomed in Ashley Formation

ST-39: 3.9 miles E of west quad. border, 3.55 miles N of south quad. border. Surface elevation 29 feet.

TEN MILE HILL BEDS	0-6	Sand, medium-grained, medium-red and medium-gray mottled, clayey, massive
	6-10	Sand, coarse-grained, medium-red
	10-15	Clay, medium-gray
	15-18	Sand, fine-grained, light-brown, clayey, lumps of phosphate abundant
ASHLEY FM	18-25	Calcarenite, fine-grained, light-brown, clayey, calcite-cemented lumps scattered throughout

Base of Ten Mile Hill beds: +11 feet above sea level
Bottomed in Ashley Formation

ST-40: 1.4 miles E of west quad. border, 3.65 miles S of north quad. border. Surface elevation about 45 feet.

LADSON FM	0-9	Sand, medium-grained, medium-reddish-orange at top grading down to medium-yellow, clayey
	9-10	Clay, medium-gray
	10-25	Sand, fine-grained, medium-yellow, clayey, lumps of phosphate at base
ASHLEY FM	25-30	Calcarenite, fine-grained, light-brown grading down to olive-brown

Base of Ladson Formation: +20 feet above sea level
Bottomed in Ashley Formation

ST-41: 2.65 miles W of east quad. border, 4.05 miles S of north quad. border. Surface elevation about 8 feet.

SILVER BLUFF	0-2	Clay, medium-brown, woody
WANDO FM (UPPER MEM)	2-6	Sand, very coarse grained to conglomerate, pebbly, quartz-rich, well sorted, light-yellowish-gray
ASHLEY FM	6-10	Calcarenite, fine-grained, olive-brown

Base of Silver Bluff (Holocene): +6 feet above sea level
Base of Wando Formation (upper member): +2 feet above sea level
Bottomed in Ashley Formation

ST-42: 3.1 miles W of east quad. border, 4.1 miles N of south quad. border.
Surface elevation 29 feet.

TEN MILE HILL BEDS	0-10	Clay, sandy, medium-orange and medium-gray mottled, tough, massive
	10-17	Sand, coarse-grained, medium-orange, contains phosphate lumps in basal 2 feet
CHANDLER BRIDGE FM	17-18	Sand, fine-grained, dark-olive-green, black phosphate sand abundant
ASHLEY FM	18-25	Calcarenite, fine-grained, olive-brown, contains calcite-cemented lumps

Base of Ten Mile Hill beds: +12 feet above sea level
Base of Chandler Bridge Formation: +11 feet above sea level
Bottomed in Ashley Formation

ST-43: 3.15 miles E of west quad. border, 3.8 miles S of north quad. border.
Surface elevation 37 feet.

TEN MILE HILL BEDS	0-9.5	Sand, coarse-grained, medium-orange grading down to medium-yellow, clayey
	9.5-16	Silt, clayey, medium-yellow, contains a few gray clay blebs
	16-28	Clay, medium-bluish-gray, micaceous massive, sticky, contains lenses of fine-grained medium-brown sand
	28-29	Clay, sandy, medium-brown
ASHLEY FM	29-35	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +18 feet above sea level
Bottomed in Ashley Formation

ST-44: 2.25 miles E of west quad. border, 4.1 miles S of north quad. border.
Surface elevation 30 feet.

TEN MILE HILL BEDS	0-4	Clay, medium-gray, massive
ASHLEY FM	4-15	Residuum, fine-grained sand, silty, light-brown grading down to calcarenite, fine-grained, light-brown, no evidence for an unconformity

Base of Ten Mile Hill beds: +26 feet above sea level
Bottomed in Ashley Formation

ST-45: 2.45 miles E of west quad. border, 2.6 miles S of north quad. border.
Surface elevation 45 feet.

LADSON FM	0-16	Sand, medium-grained, medium-yellow, slightly clayey
	16-22	Sand, medium-grained, medium-yellow, rare phosphate pebbles at base
CHANDLER BRIDGE FM	22-25	Sand, medium-grained, medium-greenish-gray, slightly calcareous
ASHLEY FM	25-30	Calcarenite, fine-grained, light-brown

Base of Ladson Formation: +23 feet above sea level
Base of Chandler Bridge Formation: +20 feet above sea level
Bottomed in Ashley Formation

ST-46: 0.4 miles E of west quad. border, 1.85 miles S of north quad. border.
Surface elevation 50 feet.

LADSON FM	0-2	Soil
	2-9.5	Sand, medium-grained, light-gray, clayey
	9.5-11.5	Sand, medium-grained, medium-gray, slightly clayey, muscovitic
	11.5-19	Sand, medium-grained, dark-gray, silty, phosphate lumps scattered throughout lower 4 feet
ASHLEY FM	19-20	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation: +31 feet above sea level
Bottomed in Ashley Formation

ST-47: 1.5 miles E of west quad. border, 1.95 miles S of north quad. border.
Surface elevation 65 feet.

LADSON FM	0-9	Sand, coarse-grained, medium-yellow grading down to light-brown, slightly clayey, grades to:
	9-11	Sand, medium-grained, light-brown, more clayey than above
	11-12	Clay, light-gray
	12-30	Sand, medium-grained, light-yellow grading down to light-gray, clayey, shelly in lower 8 feet, phosphate lumps present near base
ASHLEY FM	30-35	Calcarenite, fine-grained, olive-brown

Base of Ladson Formation: +35 feet above sea level
Bottomed in Ashley Formation

ST-48: 1.3 miles E of west quad. border, 0.3 miles S of north quad. border. Surface elevation 73 feet

PENHOLOWAY FM	0-2	Soil, medium-gray, clayey
	2-22	Clay, dark-brownish-red grading down to light-reddish-gray, soft, micaceous
	22-33	Sand, fine-grained, medium-bluish-gray, silty, clayey, micaceous, phosphate lumps abundant in basal 3 feet
ASHLEY FM	33-35	Calcarenite, fine-grained, light-brown, contains calcite-cemented lumps

Base of Penholoway Formation: +40 feet above sea level
Bottomed in Ashley Formation

ST-49: 1.4 miles E of west quad. border, 1.25 miles S of north quad. border. Surface elevation 69 feet.

PENHOLOWAY FM	0-12.5	Clay, medium-red, micaceous, soft, grading down to medium-orange with sparse medium-gray mottles near base
	12.5-29	Sand, fine-grained grading down to medium-grained, medium-orange, phosphate pebbles present in basal 3 feet
ASHLEY FM	29-30	Calcarenite, fine-grained, light-brown

Base of Penholoway Formation: +40 feet above sea level
Bottomed in Ashley Formation

ST-50: 0.35 miles E of west quad. border, 0.1 miles S of north quad. border. Surface elevation 69 feet.

PENHOLOWAY FM	0-17	Clay, light-red with scattered light-gray mottles, micaceous
	17-25	Sand, fine-grained, light-red grading down to medium-orange, grades to:
	25-29	Sand, medium-grained, medium-orange, phosphate pebbles and oyster shells present
ASHLEY FM	29-30	Calcarenite, fine-grained, light-brown

Base of Penholoway Formation: +40 feet above sea level
Bottomed in Ashley Formation

ST-51: 3.1 miles W of east quad. border, 3.15 miles S of north quad. border.
Surface elevation 35 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained, medium-gray and medium-brown mottled, muscovitic, scattered coarse quartz and feldspar grains present
	5-18	Sand, medium-grained, light-gray grading down to medium-yellow, 2 mm quartz granules near top, more pebbly and coarser downward
ASHLEY FM	18-25	Calcarenite, fine-grained, light-brown grading down to olive-brown, unusually quartz sandy (apparently burrowed) in upper foot

Base of Ten Mile Hill beds: +17 feet above sea level
Bottomed in Ashley Formation

ST-52: 2.35 miles E of west quad. border, 2.1 miles S of north quad. border.
Surface elevation 62 feet.

LADSON FM	0-8	Sand, coarse-grained, medium-reddish-orange, clayey
	8-9	Clay, medium-gray and medium-red mottled
	9-14	Sand, coarse-grained, medium-orange, clayey
	14-30	Sand, fine-grained and medium-grained interbedded, medium-orange, clayey, shelly (including oysters and others) below 23 feet, phosphate pebbles present below 27 feet
ASHLEY FM	30-35	Calcarenite, fine-grained, olive-brown, unusually quartz sandy (burrowed) in top foot

Base of Ladson Formation: +32 feet above sea level
Bottomed in Ashley Formation

ST-53: 0.35 miles E of west quad. border, 1.0 miles S of north quad. border.
Surface elevation 58 feet.

PENHOLOWAY FM	0-5	Clay, medium-gray
	5-9	Clay, light-yellow, silty
	9-18	Sand, fine-grained, light-yellow, silty and clayey
	18-20	Clay, dark-gray
	20-29	Sand, coarse-grained, to conglomerate, granular, medium-bluish-gray
CHANDLER BRIDGE FM	29-32	Sand, fine-grained, dark-greenish-gray, dense
ASHLEY FM	32-35	Calcarenite, fine-grained, olive-green

Base of Penholoway Formation: +29 feet above sea level
Base of Chandler Bridge Formation: +26 feet above sea level
Bottomed in Ashley Formation

ST-54: 2.4 miles E of west quad. border, 0.05 miles S of north quad. border.
Surface elevation 69 feet.

PENHOLOWAY FM	0-14	Clay, light-red with medium-gray mottles
	14-23	Clay, medium-blue to medium-bluish-gray, contains dense lumps
	23-28	Sand, fine-grained grading down to medium-grained, medium-bluish gray, very shelly, large phosphate lumps present at base
ASHLEY FM	28-30	Calcarenite, fine-grained, light-brown

Base of Penholoway Formation: +41 feet above sea level
Bottomed in Ashley Formation

ST-55: 1.1 miles W of east quad. border, 0.15 miles S of north quad. border.
Surface elevation about 55 feet.

PENHOLOWAY FM	0-5.5	Clay, medium-red
	5.5-16	Sand, fine-grained grading down to medium-grained, medium-orange, clayey
	16-18	Sand, coarse-grained, light-orange, phosphate pebbles present at base
ASHLEY FM	18-20	Calcarenite, fine-grained, light-brown

Base of Penholoway Formation: +36 feet above sea level
Bottomed in Ashley Formation

ST-56: 0.1 miles W of east quad. border, 3.05 miles S of north quad. border.
Surface elevation 50 feet.

LADSON FM	0-1	Sand, fine-grained, white
	1-6	Clay, medium-gray, slightly sandy
	6-25	Sand, fine-grained coarsening through medium- to coarse-grained, medium-red with medium-gray mottles, clayey, sparse phosphate pebbles at base
PENHOLOWAY FM	25-28	Sand, fine-grained, light-yellowish-gray, clayey
CHANDLER BRIDGE FM(?)	28-29	Sand, fine-grained, dark-olive-green
ASHLEY FM	29-35	Calcarenite, fine-grained, dark-olive-green

Base of Ladson Formation:	+25 feet above sea level
Base of Penholoway Formation:	+22 feet above sea level
Base of Chandler Bridge(?) Formation:	+21 feet above sea level

Bottomed in Ashley Formation

ST-57: 0.2 miles W of east quad. border, 3.0 miles S of north quad. border. Surface elevation about 26 feet.

TEN MILE HILL BEDS	0-1	Sand, fine-grained, medium-gray, clayey, sticky
	1-11	Sand, fine-grained grading through medium- to coarse-grained, medium-yellow to white, large phosphate lumps present at base
ASHLEY FM	11-15	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: +15 feet above sea level
Bottomed in Ashley Formation

ST-58: 1.5 miles W of east quad. border, 3.1 miles S of north quad. border. Surface elevation 19 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained grading down to fine-grained, medium-gray, phosphate lumps scattered throughout
ASHLEY FM	5-10	Calcarenite, fine-grained, light-brown

Base of Ten Mile Hill beds: +14 feet above sea level
Bottomed in Ashley Formation

ST-59: 0.1 miles W of east quad. border, 3.45 miles N of south quad. border, Surface elevation 24 feet.

TEN MILE HILL BEDS	0-6	Clay, medium-gray, sandy, phosphate lumps scattered throughout
	6-10	Sand, fine-grained, medium-gray, clayey
	10-13	Sand, medium-grained, medium-gray, sparse phosphate pebbles and worn bones at base
ASHLEY FM	13-15	Calcarenite, fine-grained, light-brown, calcite-cemented lumps scattered throughout

Base of Ten Mile Hill beds: +11 feet above sea level
Bottomed in Ashley Formation

ST-60: 0.75 miles W of east quad. border, 3.95 miles N of south quad. border. Surface elevation 21 feet.

TEN MILE HILL BEDS	0-5	Clay, medium-gray, massive
	5-6	Clay, medium-gray, phosphate pebbles scattered throughout
ASHLEY FM	6-10	Calcarenite, fine-grained, light-brown, soft

Base of Ten Mile Hill beds: +15 feet above sea level
Bottomed in Ashley Formation

ST-61: 1.7 miles E of west quad. border, 4.1 miles N of south quad. border. Surface elevation 30 feet.

TEN MILE HILL BEDS	0-8	Sand, fine-grained, medium-orange and medium-gray mottled grading down to medium-gray, clayey
	8-15	Clay, dark-brownish-gray grading down to light-brownish-gray
	15-17	Sand, coarse-grained, medium-orange, contains numerous phosphate pebbles
ASHLEY FM	17-20	Calcarenite, fine-grained, light-brown, contains calcite-cemented lumps

Base of Ten Mile Hill beds: +13 feet above sea level
Bottomed in Ashley Formation

ST-62: 0.6 miles E of west quad. border, 2.9 miles N of south quad. border. Surface elevation 21 feet.

WANDO FM (UPPER MEM)	0-6	Clay, medium-gray
	6-10	Sand, medium-grained, medium-gray, slightly clayey, contains churned-in lumps of clay
	10-11	Sand, fine-grained, medium-orange, clayey
	11-15	Sand, medium-grained, light-yellowish-brown
	15-19	Sand, medium-grained, light-blue, rare phosphate pebbles at base
ASHLEY FM	19-20	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (upper member): +2 feet above sea level
Bottomed in Ashley Formation

ST-63: 0.45 miles E of west quad. border, 3.6 miles S of north quad. border.
Surface elevation 15 feet.

WANDO FM (UPPER MEM)	0-2	Clay, medium-gray
	2-10	Clay, medium-gray, sandy
	10-15	Clay, medium-bluish-gray, breaks into hard lumps; phosphate pebbles and skate teeth at base
ASHLEY FM	15-20	Calcarenite, fine-grained, light-brown

Base of Wando Formation (upper member): ±0 feet at sea level
Bottomed in Ashley Formation

ST-64: 1.55 miles W of east quad. border, 3.3 miles N of south quad. border.
Surface elevation 31 feet.

TEN MILE HILL BEDS	0-3	Sand, medium-grained, medium-gray
	3-16	Sand, medium-grained, medium-yellow, clay lenses at 11 and 15 feet
	16-19	Sand, medium-grained, medium-gray
	19-21	Clay, medium-blue, lumps of phosphate abundant
ASHLEY FM	21-25	Calcarenite, fine-grained, medium-brown

Base of Ten Mile Hill beds: +10 feet above sea level
Bottomed in Ashley Formation

ST-65: 3.5 miles E of west quad. border, 4.0 miles N of south quad. border.
Surface elevation about 18 feet.

WANDO FM (UPPER MEM)	0-2	Clay, medium-gray, loamy
	2-6	Clay, medium-gray, scattered coarse quartz sand grains and phosphate lumps present
ASHLEY FM	6-10	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (upper member): +12 feet above sea level
Bottomed in Ashley Formation

ST-66: 2.65 miles E of west quad. border, 3.2 miles N of south quad. border. Surface elevation 30 feet.

TEN MILE HILL BEDS	0-7	Clay, sandy, medium-orange
	7-10	Clay, medium-gray, phosphate pebbles and worn bones abundant
ASHLEY FM	10-20	Calcarenite, fine-grained, light-brown, weathered in upper five feet

Base of Ten Mile Hill beds: +20 feet above sea level
Bottomed in Ashley Formation

ST-67: 1.65 miles E of west quad. border, 2.9 miles N of south quad. border. Surface elevation 35 feet.

TEN MILE HILL BEDS	0-4	Sand, fine-grained, light-gray, silty
	4-5.5	Clay, light-gray, sandy
	5.5-15	Clay, medium-gray, silty, coarse-grained sand and rounded phosphate pebbles present in basal 3 feet
ASHLEY FM	15-20	Calcarenite, fine-grained, variably olive-brown, medium-brown, or light-brown

Base of Ten Mile Hill beds: +20 feet above sea level
Bottomed in Ashley Formation

ST-68: 1.2 miles E of west quad. border, 1.75 miles N of south quad. border. Surface elevation 21 feet.

WANDO FM (UPPER MEM)	0-4	Sand, fine-grained, light-gray
	4-10	Sand, medium-grained grading down to coarse-grained, light-yellowish-brown, muscovitic
TEN MILE HILL BEDS	10-12	Clay, sandy, medium-orange
	12-17	Sand, fine-grained, light-yellowish-brown, grading down to clay, sandy, with medium-gray and medium-blue clay lumps
	17-20	Clay, medium-blue, greasy
	20-20.5	Sand, coarse-grained, medium-orange, quartz pebbles and lumps of phosphate present
DANIEL ISLAND BEDS	20.5-23	Clay, medium-blue, wood fragments and lumps of phosphate present
ASHLEY FM	23-25	Calcarenite, fine-grained, medium-brown

Base of Wando Formation (upper member): +11 feet above sea level
Base of Ten Mile Hill beds: ±0 feet at sea level
Base of Daniel Island beds: -2 feet below sea level
Bottomed in Ashley Formation

ST-69: 2.9 miles E of west quad. border, 0.2 miles N of south quad. border. Surface elevation about 9 feet.

SILVER BLUFF	0-4	Clay, medium-gray
WANDO FM (UPPER MEM)	4-13	Sand, medium-grained grading down to coarse-grained, subangular, medium-gray grading down to dark-gray
	13-14	Clay, medium-blue
	14-19	Sand, coarse-grained, and pebble conglomerate containing rounded quartz pebbles, large phosphate lumps, and worn skate and shark teeth
ASHLEY FM	19-20	Calcarenite, fine-grained, olive-brown

Base of Silver Bluff (Holocene): +5 feet above sea level
Base of Wando Formation (upper member): -10 feet below sea level
Bottomed in Ashley Formation

ST-70: 2.55 miles E of west quad. border, 1.0 miles N of south quad. border.
Surface elevation 10 feet.

WANDO FM (UPPER MEM)	0-5	Clay, medium-gray, phosphate lumps abundant in lower 3 feet
ASHLEY FM	5-10	Calcarenite, fine-grained, medium-brown grading down to light-brown; upper 2 feet weathered to residuum

Base of Wando Formation (upper member): +5 feet above sea level
Bottomed in Ashley Formation

ST-71: 3.5 miles E of west quad. border, 1.6 miles N of south quad. border.
Surface elevation 37 feet.

TEN MILE HILL BEDS	0-7	Sand, fine-grained, medium-gray grading down to light-yellowish-brown, clayey
	7-11	Clay, medium-gray, grading down to silt
	11-17	Silt, light-brownish-gray, sandy toward base
	17-19	Clay, medium-gray
	19-23	Silt, light-yellowish-brown, lumps of rounded to angular phosphate present
ASHLEY FM	23-25	Calcarenite, fine-grained, light-brownish-gray, sand-size phosphate abundant

Base of Ten Mile Hill beds: +14 feet above sea level
Bottomed in Ashley Formation

ST-72: 2.8 miles W of east quad. border, 2.2 miles N of south quad. border.
Surface elevation about 25 feet.

TEN MILE HILL BEDS	0-9	Clay, medium-gray, contains scattered medium quartz grains
	9-11	Silt, medium-orange, contains scattered coarse quartz grains
	11-16	Sand, coarse-grained, subangular, medium-yellowish-orange, clayey, sparsely pebbly at base
ASHLEY FM	16-20	Calcarenite, fine-grained, medium-brown (weathered) grading down to light-brownish-gray

Base of Ten Mile Hill beds: +9 feet above sea level
Bottomed in Ashley Formation

ST-73: 2.65 miles W of east quad. border, 3.2 miles N of south quad. border.
Surface elevation 30 feet.

TEN MILE HILL BEDS	0-4	Clay, medium-orange
	4-9	Clay, medium-gray, sandy
	9-12	Sand, fine-grained, light-yellowish-brown, clayey, large phosphate lumps in basal foot
ASHLEY FM	12-25	Calcarenite, fine-grained, light-brown grading down to olive-green, upper four feet weathered

Base of Ten Mile Hill beds: +18 feet above sea level
Bottomed in Ashley Formation

ST-74: 0.05 miles E of west quad. border, 1.85 miles N of south quad. border.
Surface elevation 15 feet.

WANDO FM (UPPER MEM)	0-4	Sand, fine-grained, medium-orange to light-yellowish-brown, muscovitic
	4-13	Silt, sandy, light-blue to medium-blue, quartz pebbles, phosphate lumps and brittle clay lumps in basal 2 feet
ASHLEY FM	13-25	Calcarenite, fine-grained, medium-brown

Base of Wando Formation (upper member): +3 feet above sea level
Bottomed in Ashley Formation

ST-75: 0.05 miles E of west quad. border, 3.65 miles N of south quad. border.
Surface elevaton about 16 feet.

WANDO FM (UPPER MEM)	0-14.5	Sand, medium-grained grading down to very coarse-grained, medium-gray, angular, micaceous
	14.5-15	Peat, includes large fragments of wood
	15-16	Sand, coarse-grained, quartz pebbles and phosphate lumps abundant
ASHLEY FM	16-20	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (upper member): ±0 feet at sea level
Bottomed in Ashley Formation

ST-76: 0.05 miles W of east quad. border, 1.0 miles N of south quad. border.
Surface elevation 48 feet.

TEN MILE HILL BEDS	0-17	Sand, medium-grained, very fine grained heavies abundant, medium-orange grading through light-gray to medium-gray
	17-29	Silt, clayey, medium-gray, muscovitic
	29-35	Sand, medium-grained, medium-gray, phosphatic, shelly, phsophate pebble bed at base
ASHLEY FM	35-45	Calcarenite, fine-grained, olive-brown, sand-size phosphate abundant

Base of Ten Mile Hill beds: +13 feet above sea level
Bottomed in Ashley Formation

ST-77: 0.6 miles W of east quad. border, 2.8 miles N of south quad. border.
Surface elevation about 15 feet.

WANDO FM (UPPER MEM)	0-3	Sand, dominantly coarse-grained, poorly sorted, pebbly, clayey, medium-yellowish-gray and medium-orange mottled
	3-8	Sand, medium-grained, well sorted, light-brownish-gray with white lenses, very fine grained heavy minerals scattered throughout, soft
ASHLEY FM	8-15	Calcarenite, fine-grained, medium-brown where weathered at top to olive-brown downward, dense
	15-40	Calcarenite, fine-grained, shelly and foram-rich, light-green, no obvious quartz or phosphate present, softer than above

Base of Wando Formation (upper member): +7 feet above sea level
Bottomed in Ashley Formation

ST-78: 0.3 miles E of west quad. border, 2.6 miles N of south quad. border.
Surface elevation 15 feet.

WANDO FM (UPPER MEM)	0-5	Clay, sandy and pebbly, dark-gray, upper two feet probably fill
ASHLEY FM	5-57	Calcarenite, fine-grained, light-brown grading rapidly down to olive-brown, very phosphatic near base
PARKERS FERRY FM	57-85	Calcilutite, silty, medium-green

Base of Wando Formation (upper member): +10 feet above sea level
Base of Ashley Formation: -42 feet below sea level
Bottomed in Parkers Ferry Formation

ST-79: 0.15 miles E of west quad. border, 1.35 miles S of north quad. border.
Surface elevation 70 feet.

PENHOLOWAY FM	0-6	Sand, fine-grained, clayey, medium-reddish-orange grading down to medium-gray, nodules cemented with iron-hydroxide in upper two feet
	6-36	Silt, clayey, medium sand grains scattered throughout, grades down from medium-orange through medium-greenish-orange to medium-brownish-gray
	36-42	Sand, medium-grained, medium-brownish-gray, phosphatic, phosphate pebbles at base. Phosphate bed dense and not penetrated

Base of Penholoway Formation: +28 feet above sea level
Bottomed on Ashley Formation?

ST-80: 1.45 miles E of west quad. border, 0.8 miles S of north quad. border.
Surface elevation 61 feet.

PENHOLOWAY FM	0-6	Silt, clayey and sandy, medium-orange, medium-red, and medium-gray mottled
	6-16	Silt, light-brown to light-yellowish-brown, clayey and sandy, grades to:
	16-20	Sand, medium-grained, light-yellowish-brown, grades to:
	20-29	Sand, medium-grained, phosphate pebbles and quartz discoids present, sparsely shelly
ASHLEY FM	29-30	Calcarenite, fine-grained, olive-green, dense, burrowed

Base of Penholoway Formation: +32 feet above sea level
Bottomed in Ashley Formation

ST-81: 0.6 miles E of west quad. border, 0.45 miles S of north quad. border.
Surface elevation 60 feet.

PENHOLOWAY FM	0-15	Silt, clayey and sandy, medium-orange and medium-gray mottled grading down to medium-orange
	15-34	Sand, medium-grained, medium-orange grading through medium-gray to dark-gray, quartz and phosphate pebbles and barnacles present in basal 10 feet
ASHLEY FM	34-35	Calcarenite, fine-grained, olive-brown, burrows present filled with above lithology, shells and phosphate pebbles

Base of Penholoway Formation: +26 feet above sea level
Bottomed in Ashley Formation

ST-82: 1.65 miles W of east quad. border, 1.15 miles N of south quad. border.
Surface elevation 35 feet.

TEN MILE HILL BEDS	0-18	Sand, medium-grained, medium-orange and medium-gray mottled grading through medium-orange and medium-yellow to medium-gray downward, iron hydroxide-cemented nodules in upper 5 feet, muscovitic below that, silty, and clayey
	18-29	Clay, dark-gray, micaceous, sandy, stiff, scattered wood fragments present, no phosphate pebbles at base
ASHLEY FM	29-40	Calcarenite, fine-grained, olive-brown, contains calcite-cemented lumps and shell fragments

Base of Ten Mile Hill beds: +6 feet above sea level
Bottomed in Ashley Formation

ST-83: 2.8 miles W of east quad. border, 0.55 miles N of south quad. border.
Surface elevation 33 feet.

TEN MILE HILL BEDS	0-16	Sand, dominantly medium-grained, grain size bimodal, very fine grained heavy minerals abundant, micaceous, iron hydroxide-cemented nodules present in upper 5 feet, mostly medium-orange but grades abruptly down to medium-bluish-gray in basal foot
	16-17	Clay, sandy, medium-gray
	17-21	Sand, fine-grained, medium-bluish-gray
	21-26	Clay, medium-bluish-gray, contains hard dark-green lumps and small lenses of fine-grained sand (burrows?), sparse phosphate pebbles at base
ASHLEY FM	26-40	Calcarenite, fine-grained, olive-brown, soft, sand-size phosphate abundant

Base of Ten Mile Hill beds: +17 feet above sea level
Bottomed in Ashley Formation

ST-84: 2.4 miles W of east quad. border, 1.4 miles N of south quad. border.
Surface elevation 39 feet.

TEN MILE HILL BEDS	0-5	Sand, medium-grained, clayey, medium-orange and medium-gray mottled, stiff, plinthite in upper 2 feet
	5-29	Sand, medium-grained, medium-yellowish-gray grading down to light-gray, loose, silty, well-sorted, very fine grained heavies sprinkled throughout, sparse phosphate pebbles at base
ASHLEY FM	29-35	Calcarenite, fine-grained, olive-brown, sand-size phosphate abundant

Base of Ten Mile Hill beds: +10 feet above sea level
Bottomed in Ashley Formation

ST-85: 0.7 miles E of west quad. border, 4.25 miles N of south quad. border.
Surface elevation 16 feet.

WANDO FM (UPPER MEM)	0-5	Clay, medium-gray with a few medium-orange mottles, sandy, stiff
	5-13	Clay, dark-gray, micaceous, sticky
	13-16	Sand, medium- grading down to coarse-grained, dark-gray, clayey, loose, pebbly and woody at base
ASHLEY FM	16-25	Calcarenite, fine-grained, olive-brown

Base of Wando Formation (upper member): ±0 feet at sea level
Bottomed in Ashley Formation

ST-86: 0.9 miles E of west quad. border, 0.1 miles N of south quad. border.
Surface elevation 17 feet.

WANDO FM (UPPER MEM)	0-6	Clay, sandy, to sand, fine-grained, clayey, light-gray with a few medium-orange mottles.
	6-14	Silt, sandy, to sand, fine-grained, silty, medium-gray, loose, rare brownish-gray clay lenses present, rare phosphate pebbles present at base
ASHLEY FM	14-30	Calcarenite, fine-grained, medium-brown, some sand-size quartz and phosphate present

Base of Wando Formation (upper member): +3 feet above sea level
Bottomed in Ashley Formation

ST-87: 0.2 miles E of west quad. border, 0.7 miles N of south quad. border.
Surface elevation 22 feet.

TEN MILE HILL BEDS	0-5	Sand, coarse- to fine-grained, poorly sorted, medium-reddish-orange with medium-gray mottles, micaceous, stiff
	5-11	Sand, fine-grained, medium-yellowish-orange, silty, loose
	11-33	Clay, medium-gray, stiff, dense, dark-green brittle lumps scattered throughout
	33-35	Sand, coarse-grained, medium-gray, phosphate pebbles abundant at base
DANIEL ISLAND BEDS	35-37	Clay, medium-gray, stiff, woody, phosphate pebbles abundant at base
ASHLEY FM	37-45	Calcarenite, fine-grained, olive-brown

Base of Ten Mile Hill beds: -13 feet below sea level
Base of Daniel Island beds: -15 feet below sea level
Bottomed in Ashley Formation

ST-88: 1.5 miles W of east quad. border, 2.45 miles N of south quad. border. Surface elevation 14 feet.

WANDO FM (UPPER MEM)	0-7	Sand, medium-grained, medium-gray, well sorted, silty, sharp contact with bed below
TEN MILE HILL BEDS	7-9	Sand, coarse-grained, light-brown, pebbly
	9-10	Clay, medium-yellowish-brown, woody
ASHLEY FM	10-15	Calcarenite, fine-grained, olive-brown, sand-sized phosphate abundant

Base of Wando Formation (upper member): +7 feet above sea level
Base of Ten Mile Hill beds: +4 feet above sea level
Bottomed in Ashley Formation

ST-89: 1.45 miles W of east quad. border, 0.15 miles N of south quad. border. Surface elevation 40 feet.

TEN MILE HILL BEDS	0-8	Sand, medium-grained, light-gray, well sorted, very fine grained heavy minerals abundantly scattered throughout
	8-12	Silt, clayey, massive, light-gray, sticky but loose
	12-24	Sand, medium-grained, light-gray grading down to medium-gray, well-sorted, silty, very fine grained heavy minerals abundantly scattered throughout
	24-26	Sand, fine-grained, medium-gray, clayey, phosphate pebble bed at base
LADSON FM(?)	26-33	Sand, medium-grained, medium-gray, sand-size phosphate abundant, oyster fragments present at base but no phosphate pebbles
ASHLEY FM	33-40	Calcarenite, fine-grained, olive-brown, contains phosphatized molds of clams and snails

Base of Ten Mile Hill beds: +16 feet above sea level
Base of Ladson Formation(?): +7 feet above sea level
Bottomed in Ashley Formation

ST-90: 0.8 miles W of east quad. border, 0.6 miles N of south quad. border.
Surface elevation 48 feet.

TEN MILE HILL BEDS	0-19	Sand, medium-grained, medium-orange grading down to light-gray, very fine grained heavy minerals abundantly scattered throughout, micaceous
	19-23	Sand, medium-grained but finer than bed above, medium-orange
	23-25	Sand, fine-grained, medium-bluish-gray and medium-brown mottled, silty
	25-28	Clay, sandy, medium-bluish-gray and medium-brown mottled, stiff, dense
	28-33	Sand, medium-grained, medium-bluish-gray and light-gray mottled, stiff, dense, hard dark-green lumps present near base
	33-40	Sand, medium-grained, medium-gray, loose, phosphate pebble bed at base
ASHLEY FM	40-50	Calcarenite, fine-grained, olive-brown, sand-size phosphate abundant

Base of Ten Mile Hill beds: +8 feet above sea level
Bottomed in Ashley Formation

ST-91: 2.0 miles W of east quad. border, 0.85 miles S of north quad. border.
Surface elevation about 26 feet. (hole number originally STAL-6-H)

TEN MILE HILL BEDS	0-5	Clay, medium-gray with minor medium-brown and medium-gray mottles, fine- to medium-grained sandy
ASHLEY FM	5-108	Calcarenite, very fine to fine-grained, light-olive-gray to medium-olive-brown, phosphate sand and large coiled forams locally abundant, sand and pebble size phosphate abundant below 95 feet
PARKERS FERRY FM	108-130	Calcilutite, medium-greenish-gray to medium-olive-gray, fine-grained sandy

Base of Ten Mile Hill beds: +21 feet above sea level
Base of Ashley Formation: -82 feet below sea level
Bottomed in Parkers Ferry Formation

ST-92: 2.2 miles W of east quad. border, 3.3 miles S of north quad. border. Surface elevation 21 feet. (hole number originally STAL-5-H)

TEN MILE HILL BEDS	0-6	Clay, medium-orange and medium-red grading down to medium-gray, fine-grained sandy, stiff
	6-9	Sand, very- coarse-grained, medium-olive-brown, angular, clayey matrix
ASHLEY FM	9-91	Calcarenite, very fine to fine-grained, dark-olive-brown (15-25) grading down through light-olive-brown (15-25) to medium-olive-brown, phosphate sand and pebbles abundant below 76 feet, basal 3 feet includes material reworked from below
PARKERS FERRY FM(?)	91-95	Calcarenite, very fine grained, sand-size phosphate common

Base of Ten Mile Hill beds: +12 feet above sea level
Base of Ashley Formation: -70 feet below sea level?
Bottomed in Parkers Ferry Formation?

ST-93: 1.2 miles E of west quad. border, 3.45 miles N of south quad. border. Surface elevation 16 feet. (hole number originally STAL-1)

FILL	0-1	Road base
WANDO FM (UPPER MEM)	1-5	Clay, medium-gray and dark-yellowish-orange, phosphate pebbles in basal foot
ASHLEY FM	5-78	Calcarenite, very fine grained to fine-grained, light-olive-brown, sand- and granule-size phosphate and phosphate pebbles (1-2 cm diameter, abundant in basal foot, sparse quartz granules in basal foot
PARKERS FERRY FM	78-100	Calcilutite, light-olive, fine-grained sandy

Base of Wando Formation (upper member): +10 feet above sea level
Base of Ashley Formation: -62 feet below sea level
Bottomed in Parkers Ferry Formation

ST-94: 3.5 miles W of east quad. border, 3.2 miles N of south quad. border.
Surface elevation 18 feet. (hole number originally STAL-200)

WANDO FM (UPPER MEM)	0-5	Sand, fine- to medium-grained, grayish-black, very clayey
ASHLEY FM	5-88	Calcarenite, fine-grained, dusky-yellow-green grading down to olive-brown by 25 feet, phosphate sand abundant below 70 feet, grades to medium-grained near base
PARKERS FERRY FM	88-95	Calcilutite, pale-olive, silty and very- fine-grained sandy

Base of Wando Formation (upper member): +13 feet above sea level
Base of Ashley Formation: -70 feet below sea level
Bottomed in Parkers Ferry Formation

ST-95: 2.8 miles W of east quad. border, 3.05 miles N of south quad. border.
Surface elevation 16 feet. (hole number originally STAL-201)

WANDO FM (UPPER MEM)	0-4	Clay, grayish-black, silty, fine-grained sandy
ASHLEY FM	4-65	Calcarenite, very fine grained to fine-grained, dark-yellowish-orange grading down to olive-brown
PARKERS FERRY FM	65-85	Calcilutite, pale-olive, very fine grained sandy

Base of Wando Formation (upper member): +12 feet above sea level
Base of Ashley Formation: -49 feet below sea level
Bottomed in Parkers Ferry Formation

ST-96: 3.45 miles W of east quad. border, 4.2 miles S of north quad. border.
Surface elevation 22 feet. (hole number originally STAL-4)

TEN MILE HILL BEDS	0-10	Sand, fine- to medium-grained, light-gray, dark-yellowish-orange and medium-reddish-brown mottled grading down to medium-greenish-gray, muddy, thin laminae of light-gray silty clay scattered throughout, grades to:
	10-12	Sand, coarse-grained, medium-greenish-gray, 1-3 cm diameter phosphate pebbles at base
ASHLEY FM	12-93	Calcarenite, very fine grained, medium-olive-green to pale-green, clayey

Base of Ten Mile Hill beds: +10 feet above sea level
Bottomed in Ashley Formation

ST-97: 1.25 miles W of east quad. border, 3.55 miles S of north quad. border. Surface elevation 26 feet. (hole number originally STAL-3)

	0-1	Road fill
TEN MILE HILL BEDS	1-18	Clay, medium-bluish-gray, fine-grained sandy and silty, oyster fragments present from 6-9 feet, phosphate pebbles abundant at base
ASHLEY FM	18-77	Calcarenite, very fine grained to fine-grained, medium-olive-brown, contains large forams
DRAYTON LS	77-100	Calcarenite, fine-grained, light-olive-gray, much of sample fell off stems

Base of Ten Mile Hill beds: +8 feet above sea level
Base of Ashley Formation: -51 feet below sea level
Bottomed in Drayton Limestone

ST-98: 1.85 miles W of east quad. border, 2.85 miles N of south quad. border. Surface elevation about 30 feet. (hole number originally STAL-4-H)

TEN MILE HILL BEDS	0-5 5-12	Sand, coarse-grained, light-yellowish-brown, muddy Clay, light-bluish-green, medium-grained sandy
ASHLEY FM	12-53	Calcarenite, very fine grained to fine-grained, light-olive-brown (12-20) grading to medium-olive-brown, some shell fragments present, large coiled forams abundant 40-50 feet
DRAYTON LS	53-80	Calcarenite, fine-grained, light-olive-gray

Base of Ten Mile Hill beds: +18 feet above sea level
Base of Ashley Formation: -23 feet below sea level
Bottomed in Drayton Limestone

ST-99: 1.2 miles W of east quad. border, 1.4 miles N of south quad. border.
Surface elevation 28 feet. (hole number originally STAL-1-H)

TEN MILE HILL BEDS	0-13	Sand, medium-grained, medium-orangish-brown grading down to dark-brownish-yellow, clayey, stiff
	13-18	Clay, light-gray, sandy, stiff
	18-21	Sand, medium- to coarse-grained, dark-brownish-yellow, clayey, soft
	21-30	Clay, dark-greenish-gray, contains hard lumps and stringers of white sand, phosphate pebbles at base
ASHLEY FM	30-59	Calcarenite, very fine grained to fine-grained, medium-olive-brown, basal 2 feet full of phosphate pebbles
DRAYTON LS	59-75	Calcarenite, fine-grained, light-green, contains abundant fragments of bryozoans, slightly clayey

Base of Ten Mile Hill beds: -2 feet below sea level
Base of Ashley Formation: -31 feet below sea level
Bottomed in Drayton Limestone

ST-100: 3.2 miles W of east quad. border, 1.95 miles N of south quad. border.
Surface elevation about 22 feet. (hole number originally STAL-3-H)

TEN MILE HILL BEDS	0-4	Sand, coarse-grained, medium-orange, clean
	4-5	Sand, coarse-grained, medium-gray, clayey, stiff
	5-15	Sand, coarse-grained, light-brownish-yellow, very muddy
ASHLEY FM	15-105	Calcarenite, very fine grained to fine-grained, medium-brownish-yellow (15-20) grading to medium-olive-brown, sand-size phosphate abundant from 15-25 and 83-105, large coiled forams abundant 60-65, glauconitic below 83 feet

Base of Ten Mile Hill beds: +7 feet above sea level
Bottomed in Ashley Formation

ST-101: 1.25 miles N of south quad. border, 3.5 miles W of east quad. border.
Surface elevation 39 feet.(hole number originally STAL-202)

TEN MILE HILL BEDS	0-12	Sand, medium-grained, medium-yellowish-brown grading down to pale-yellowish-brown, silty, moderately well sorted
	12-25	Clay, medium-gray with sparse waxy light-olive-brown mottles, plastic, silty, stringers of medium-grained sand present below 19 feet
	25-28	Sand, poor recovery
ASHLEY FM	28-115	Calcarenite, very fine to fine-grained, pale-olive grading down to light-olive-gray, phosphate sand abundant below 105 feet

Base of Ten Mile Hill beds: +11 feet above sea level
Bottomed in Ashley Formation